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Location: Remsen Building
Phone: (571) 272-2529

sheppard@uspto.gov

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FILE LAST UPDATED: 22 Apr 2004  (20040422/ED)

 This file contains CAS Registry Numbers for easy and accurate
 substance identification.


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L13         6790 SEA FILE=REGISTRY ABB=ON  PLU=ON  CADIDENE OR CAMPHENE OR
                 CAMPHOR OR CARENE OR CARYOPHYLLENE OR CARVONE OR CARVACROL OR
                 CARYOPHYLLENE OR CINNAMIC(W)ALDEHYDE OR CITRAL OR CITRONELLAL
                 OR CINEOL OR ANISOLE OR CARYOPHYLLENE OR CINEOLE OR CYMEME
L14       231798 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L13 OR CADIDENE OR CAMPHENE
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                 OR CARYOPHYLLENE OR CINNAMIC(W)ALDEHYDE OR CITRAL OR CITRONELLA
                 L OR CINEOL OR ANISOLE OR CARYOPHYLLENE OR CINEOLE OR CYMEME
L16         1553 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L14 (L)(REPEL? INSECTICIDE?
                 OR APHICIDE? OR ACARICIDE? OR ANTIBACTERIAL(W) AGENT OR
                 FUNGICIDE  OR NEMATOCIDE? OR PESTICIDE? OR TERMITICIDE?)
L17          750 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L14(L)(LABIATAE OR  UMBELLIFER
                 A OR THYMBRA OR  SATUREJA OR ORIGANUM OR  CORYDOTHYMUS OR
                 PINPINELLA OR FOENICULUM OR SPICATA OR MAJORANA OR CAPITATUS
                 OR VULGARE OR SOLYMICUM OR SPYLEUM OR BILGERI OR MINUTIFLORUM
                 OR ACCATUM OR SRIACUM OR ONITES OR ANISUM)
L18           13 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L17 AND L16


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L18  ANSWER 1 OF 13  HCAPLUS  COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER:        2002:627749  HCAPLUS
DOCUMENT NUMBER:         137:291650
TITLE:                   Component composition and antibiotic activity of
                         essential oil from Origanum vulgare L. Grown in some
                         regions of West Siberia
AUTHOR(S):               Kazarinova, N. V.; Tkachenko, K. G.; Muzychenko, L.
                         M.; Safonova, N. G.; Tkachev, A. V.; Koroljuk, E. A.
CORPORATE SOURCE:        Inst. Obshch. Patol. Ekol. Cheloveka, NTsKEM, SO RAN,
                         Novosibirsk, Russia
SOURCE:                  Rastitel'nye Resursy (2002), 38(2), 99-103
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CODEN: RRESA8; ISSN: 0033-9946
PUBLISHER: Nauka
DOCUMENT TYPE: Journal
LANGUAGE: Russian
AB Essential oils of **Origanum vulgare** L. collected in different natural populations on the territory of Mountainous Altai and Novosibirsk region during 1998-1999 are investigated. The following substances are identified in the compn.: sabinene (10%), .beta.-myrcene (5%), 1,8-**cineol** (3%), cis-.beta.-ocimene (14%), trans-.beta.-ocimene (19%), .gamma.-terpinene (3%), **caryophyllene** (12%), germacrene D (9%), bicyclogermacrene (3%), and .alpha.-farnesene (4%). Thymol and **carvacrol** - the principles of essential oil of this species according to literature data, were absent in the species investigated. Thymol was found in essential oil of three samples in trace amts. (0.1-0.2%). Absence of antibiotic activity of the essential oils is shown against Staphylococcus aureus, Candida albicans, Pseudomonas aeruginosa in diln. 300 .mu.g/mL. The samples which contain thymol in trace quantity (<0.5%), in doses of 600 .mu.g/mL have **fungicide** effect against Candida albicans, and bactericide activity against Pseudomonas aeruginosa.
IT **87-44-5, Caryophyllene 470-82-6,** 1,8-**Cineol**
RL: BSU (Biological study, unclassified); BIOL (Biological study) (component compn. and antibiotic activity of essential oil from **Origanum vulgare** L. Grown in some regions of West Siberia)

L18 ANSWER 2 OF 13 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 2002:574841 HCAPLUS
DOCUMENT NUMBER: 137:121078
TITLE: Pesticidal compositions containing organic phenolic compounds and transition metal salts
INVENTOR(S): Ninkov, Dusan
PATENT ASSIGNEE(S): USA
SOURCE: PCT Int. Appl., 36 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2002058469	A1	20020801	WO 2002-US1903	20020123
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
US 2002156135	A1	20021024	US 2002-56593	20020123
EP 1353552	A1	20031022	EP 2002-702056	20020123
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR				

PRIORITY APPLN. INFO.: US 2001-263656P P 20010123
WO 2002-US1903 W 20020123

AB A pesticidal compd. comprises at least one org. phenolic compd. and at least one salt comprising a divalent cation. Preferably, the org. phenolic compd. is chosen from carvacrol, thymol or combinations thereof, and is derived from a natural source, preferably extd. from a member of

the family Lamiaceae or Verbenaceae. Preferably the divalent cation is a transition metal salt and more preferably is zinc chloride or zinc sulfate. The invention also includes methods of eradicating, repelling or preventing infestations of pests, including such pests as insects, mites, fungi, or parasites. The methods comprise the steps of prepg. a pesticidal compd., combining it with a carrier, and applying it to the affected area.

REFERENCE COUNT: 10 THERE ARE 10 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L18 ANSWER 3 OF 13 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 2002:127903 HCAPLUS
DOCUMENT NUMBER: 136:196894
TITLE: Antimicrobial activity profiles of the two enantiomers of limonene and **carvone** isolated from the oils of Mentha **spicata** and Anethum sowa
AUTHOR(S): Aggarwal, K. K.; Khanuja, S. P. S.; Ahmad, Ateeque; Kumar, T. R. Santha; Gupta, Vivek K.; Kumar, Sushil
CORPORATE SOURCE: Central Institute of Medicinal and Aromatic Plants, Lucknow, 226015, India
SOURCE: Flavour and Fragrance Journal (2002), 17(1), 59-63
CODEN: FFJOED; ISSN: 0882-5734
PUBLISHER: John Wiley & Sons Ltd.
DOCUMENT TYPE: Journal
LANGUAGE: English
AB The antimicrobial activity of the essential oils of Mentha **spicata** L. and Anethum sowa Roxb. (Indian dill) were studied. The major chem. constituents of the hydrodistd. essential oils and their major isolates from cultivated M. **spicata** and A. sowa were identified by IR, 1H- and 13C-NMR and GC: (S)-(-)-limonene (27.3%) and (S)-(-)-**carvone** (56.6%) (representing 83.9% of the spearmint oil) and (R)-(+)-limonene (21.4%), dihydrocarvone (5.0%), (R)-(+)-**carvone** (50.4%) and dillapiole (17.7%) (together 76.9% in Indian dill oil), resp. In vitro bioactivity evaluation of the isolated oil components revealed that both the optical isomers of **carvone** were active against a wide spectrum of human pathogenic fungi and bacteria tested. (R)-(+)-limonene showed comparable bioactivity profile over the (S)-(-)-isomer. The activity of these monoterpene enantiomers was found to be comparable to the bioactivity of the oils in which they occurred.
IT **2244-16-8**, (+)-**Carvone** **6485-40-1**, (-)-**Carvone**
RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(antimicrobial activity of enantiomers of limonene and **carvone** and essential oils of Mentha **spicata** and Anethum sowa)
REFERENCE COUNT: 23 THERE ARE 23 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L18 ANSWER 4 OF 13 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 2001:854289 HCAPLUS
DOCUMENT NUMBER: 136:36684
TITLE: Potato sprout growth suppression by menthone and neomenthol, volatile oil components of Minthostachys, Satureja, Bystropogon, and Mentha species
AUTHOR(S): Coleman, Warren K.; Lonergan, Greg; Silk, Peter
CORPORATE SOURCE: Potato Research Centre, Agriculture and Agri-Food Canada, Fredericton, NB, E3B 4Z7, Can.
SOURCE: American Journal of Potato Research (2001), 78(5), 345-354
CODEN: AJPRFQ; ISSN: 1099-209X
PUBLISHER: Potato Association of America
DOCUMENT TYPE: Journal
LANGUAGE: English

AB The replacement of synthetic **pesticides** such as chlorpropham (CIPC) with effective potato sprout suppressants that have negligible environmental impact is needed due to increased concern for consumer health and safety. To date, however, only S-(+)-**carvone**, a monoterpene produced from caraway seeds, has been developed com. as a competitive product to CIPC. Consequently, the effects of menthone and neomenthol vapor were compared to S-(+)-**carvone** for sprout suppressant efficacy as well as for effects on sol. sugar levels, respiration, and processing quality during high and low temp. storage. In the majority of treatments, tubers were enclosed in 3.8 l glass jars at 25 C. Liq. test compds. were applied to a 10-cm-long .times. 2-cm-wide filter paper strip (Whatman No. 1) enclosed in each jar. Treatment with either menthone or S-(+)-**carvone** at 5 ul liq./l of treatment vol. gave complete sprout suppression in non-dormant Russet Burbank tubers. An examn. of changes in CO2 output, glucose, or sucrose levels over 4 wk at 10 C indicated that the effects of menthone and S-(+)-**carvone** were similar. In addn., menthone significantly inhibited sprouting without adversely affecting the percentage glucose content or sucrose content when this compd. was applied at 4 ul/l to five-month-old, non-dormant tubers of AC Novachip, Russet Burbank, Shepody, and Snowden for two months at 10 C. Menthone and neomenthol were five to ten times more effective in suppressing tuber sprouting than S-(+)-**carvone** when applied together at 0.5 ul/l each.

IT **2244-16-8**, S-(+)-**Carvone**
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(potato sprout growth suppression by menthone and neomenthol, volatile oil components of Minthostachys, **Satureja**, Bystropogon, and Mentha species, as compared to)

REFERENCE COUNT: 21 THERE ARE 21 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L18 ANSWER 5 OF 13 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 2001:822451 HCAPLUS
DOCUMENT NUMBER: 135:340475
TITLE: Natural agrochemical fungicides for controlling mildew and anthracnose
INVENTOR(S): Usuta, Sadayoshi
PATENT ASSIGNEE(S): Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 8 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2001316214	A2	20011113	JP 2000-139051	20000511
PRIORITY APPLN. INFO.:			JP 2000-139051	20000511

AB The **fungicides** comprise exts. or essential oils contg. thymol or its regioisomer **carvacrol** of **Labiatae** plants. Thus, Mosla chinensis Maxim ext. contg. 9.6 g thymol/100 g showed strong antifungal activity against Leveillula taurica, Sphaerotheca fuliginea, and Colletotrichum fragariae.

IT **499-75-2**, **Carvacrol**
RL: AGR (Agricultural use); BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BIOL (Biological study); USES (Uses)
(agrochem. **fungicides** contg. **Labiatae** plant exts. for controlling mildew and anthracnose)

IT **89-83-8P**, Thymol
RL: AGR (Agricultural use); BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); PUR (Purification or

recovery); BIOL (Biological study); PREP (Preparation); USES (Uses)
(agrochem. **fungicides** contg. **Labiatae** plant exts.
for controlling mildew and anthracnose)

L18 ANSWER 6 OF 13 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1997:740695 HCAPLUS
DOCUMENT NUMBER: 127:328906
TITLE: Seasonal variations in the chemical compositions of essential oils of selected aromatic plants growing wild in Turkey
AUTHOR(S): Mueller-Riebau, Frank J.; Berger, Bernhard M.; Yegen, Oktay; Cakir, C.
CORPORATE SOURCE: Institut fuer Pflanzenpathologie und Pflanzenschutz, Universitaet Goettingen, Goettingen, 37077, Germany
SOURCE: Journal of Agricultural and Food Chemistry (1997), 45(12), 4821-4825
CODEN: JAFCAU; ISSN: 0021-8561
PUBLISHER: American Chemical Society
DOCUMENT TYPE: Journal
LANGUAGE: English
AB The summer leaves of **Thymbra spicata** var. **spicata** and **Satureja thymbra**, two **Labiatae** arom. shrubs growing wild in the East Mediterranean region of Turkey, and, in addn., the leaves of Salvia fruticosa, Mentha pulegium, Laurus nobilis, and Inula viscosa were collected in 4-wk intervals to follow plant development and essential oil compn. The essential oils extd. from leaves (and flowering tops) were estd. during the growing season by means of GC-FID, and 19 terpenic constituents were identified. The changes in the essential oil content (quantity and compn.) varied for all six plant species, according to corresponding environmental and growth factors and the major adaptive strategy toward summer drought that each plant species has evolved. The concn. of the fungitoxic components in the essential oils of **Thymbra spicata** and **Satureja thymbra**, the phenolic constituents **carvacrol** and thymol, were low in the early phenol. stage and increased gradually with plant development. The max. was reached in June/July, shortly after flowering. Taking this into account, the harvest of these two species in order to obtain their essential oils offers acceptable economic possibilities for their use as a natural **fungicide**. The main compds. of the essential oils found in Salvia fruticosa, Laurus nobilis, and Mentha pulegium were the oxygen-contg. monoterpenes 1,8-**cineole** and pulegone, resp., and a periodic increase and decrease in their concns. was obsd. The essential oil of Inula viscosa contained only small amts. of some of the investigated components. The best time of harvest to gain the essential oils with the highest active ingredients is July for **Thymbra spicata**, **Satureja thymbra**, Salvia fruticosa, and Mentha pulegium (**Labiatae**) and Sept. for Laurus nobilis (Lauraceae).

L18 ANSWER 7 OF 13 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1996:403606 HCAPLUS
DOCUMENT NUMBER: 125:51403
TITLE: Eugenol and carvacrol: the main fungicidal compounds in clove and savory
AUTHOR(S): Martini, H.; Weidenboerner, M.; Adams, S.; Kunz, B.
CORPORATE SOURCE: Institut Lebensmitteltechnologie, Universitaet Bonn, Bonn, 53117, Germany
SOURCE: Italian Journal of Food Science (1996), 8(1), 63-67
CODEN: ITFSEY; ISSN: 1120-1770
PUBLISHER: Chiriotti
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Concns. of eugenol and carvacrol in ethanolic exts. of cloves and savory,

resp., were detd. quant. by GC. Both compds. were exclusively responsible for the antifungal action of these spices against Cladosporium herbarum and Penicillium glabrum. Other constituents showed no or insignificant activity.

L18 ANSWER 8 OF 13 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1995:958216 HCAPLUS
DOCUMENT NUMBER: 123:332775
TITLE: Method for compounding pesticide-"kangchongling"
INVENTOR(S): Huang, Jianbin; Lu, Qingming; Li, Zhixiong
PATENT ASSIGNEE(S): Pingle Farm Chemical Plant, Guangxi, Peop. Rep. China
SOURCE: Faming Zhuanli Shenqing Gongkai Shuomingshu, 6 pp.
CODEN: CNXXEV
DOCUMENT TYPE: Patent
LANGUAGE: Chinese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
CN 1102540	A	19950517	CN 1994-103883	19940331
CN 1036824	B	19971231		

PRIORITY APPLN. INFO.: CN 1993-117036 19930831
AB The kangchongling **pesticide** is prepd. easily from dimehypo, shachongdan (Reg: 29547-00-0), and shidishui. The shidishui is a common medicine for summer ailments prepd. from seven ingredients, i.e. **camphor**, capsicum, **foeniculum**, shijiang, cinnamon, eucalyptus oil, and dahuang. The kangchongling is an highly effective **pesticide**.
IT **76-22-2, Camphor**
RL: AGR (Agricultural use); BIOL (Biological study); USES (Uses)
(method for compounding **pesticide**-kangchongling)

L18 ANSWER 9 OF 13 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1995:714300 HCAPLUS
DOCUMENT NUMBER: 123:93010
TITLE: Chemical Composition and Fungitoxic Properties to Phytopathogenic Fungi of Essential Oils of Selected Aromatic Plants Growing Wild in Turkey
AUTHOR(S): Mueller-Riebau, Frank; Berger, Bernhard; Yegen, Oktay
CORPORATE SOURCE: Institut fuer Pflanzenpathologie und Pflanzenschutz, Universitaet Goettingen, Goettingen, 37077, Germany
SOURCE: Journal of Agricultural and Food Chemistry (1995), 43(8), 2262-6
CODEN: JAFCAU; ISSN: 0021-8561
PUBLISHER: American Chemical Society
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Essential oils of **Thymbra spicata, Satureja thymbra**, Salvia fruticosa, Laurus nobilis, Mentha pulegium, Inula viscosa, Pimpinella **anisum**, Eucalyptus camaldulensis, and **Origanum** minitiflorum plants growing wild in southern Turkey were investigated by means of GC-FID, and 20 components were identified. The main ones were .gamma.-terpinene, p-cymene, thymol, and **carvacrol** as well as 1,8-**cineole**, pulegone, and anethole. Biol. assays showed that fungitoxicity against the soil-borne plant disease-causing fungi Fusarium moniliforme, Rhizoctonia solani, Sclerotinia sclerotiorum, and Phytophthora capsici was due to different concns. of the phenolic fraction (esp. thymol and/or **carvacrol**) in the essential oils.

L18 ANSWER 10 OF 13 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1993:645329 HCAPLUS
DOCUMENT NUMBER: 119:245329

TITLE: In vitro antifungal activity of Satureja montana L. essential oil and its components
AUTHOR(S): Menghini, A.; Pagiotti, R.; Capuccella, M.
CORPORATE SOURCE: Dip. Biol. Veg., Univ. Perugia, Perugia, Italy
SOURCE: Rivista Italiana EPPOS (1992), 3(8), 3-7
CODEN: RIEPD7; ISSN: 0392-0445
DOCUMENT TYPE: Journal
LANGUAGE: French
AB S montana L. essential oil was tested on Trichophyton mentagrophytes, Trichoderma viride, Botrytis cinerea, and Aspergillus flavus. The oil stopped mycelial proliferation by these spp. The inhibiting action of compds. of the oil (carvacrol, thymol, linalool, p-cymene, myrcene, limonene) was tested on T. mentagrophytes. Carvacrol showed a very strong antimycotic action. SEM and TEM observation showed effects on cellular structures.

L18 ANSWER 11 OF 13 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1993:228106 HCAPLUS
DOCUMENT NUMBER: 118:228106
TITLE: The fungitoxicity of extracts of six selected plants from Turkey against phytopathogenic fungi
AUTHOR(S): Yegen, O.; Berger, B.; Heitefuss, R.
CORPORATE SOURCE: Akdeniz Univ., Antalya, 07003, Turk.
SOURCE: Zeitschrift fuer Pflanzenkrankheiten und Pflanzenschutz (1992), 99(4), 349-59
CODEN: ZPFPAA; ISSN: 0340-8159
DOCUMENT TYPE: Journal
LANGUAGE: German
AB Aq. exts. and essential oils of **Thymbra spicata**, **Satureja thymbra**, Laura nobilis, Mentha **spicata**, Salvia fruticosa, and Inula viscosa exhibited fungitoxicity against 4 phytopathogenic fungi. The essential oils of T. **spicata** and S. **thymbra** were most effective in inhibiting mycelial growth of the test fungi with min. inhibitory concns. 400-800 mg/L medium. The volatile phase of the essential oils was also effective, and the oils were more toxic against Phytophthora capsici than the **fungicides** carbendazim and pentachlornitrobenzene. TLC investigation implicated thymol and **carvacrol** as active compds.

L18 ANSWER 12 OF 13 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1987:170621 HCAPLUS
DOCUMENT NUMBER: 106:170621
TITLE: Susceptibility of cereals to organochlorine pesticides
AUTHOR(S): Akbar, Sher; Rogers, Lyndon J.
CORPORATE SOURCE: Dep. Biochem. Agric. Biochem., Univ. Coll. Wales, Aberystwyth/Dyfed, SY23 3DD, UK
SOURCE: Pakistan Journal of Scientific and Industrial Research (1986), 29(6), 439-44
CODEN: PSIRAA; ISSN: 0030-9885
DOCUMENT TYPE: Journal
LANGUAGE: English
AB To investigate the genetic and biochem. basis of **pesticide** tolerance, cereal seedlings were sprayed with DDT [50-29-3] or toxaphene (I) [**8001-35-2**]. Chloroplasts were isolated 2 days after spraying and photosynthetic electron flow (DCPIP and ferricyanide photoredn.) was detd. as an index of injury. All varieties of oats (Avena sativa, A. fatua, A. nuda, and A. strigosa) were resistant to DDT, and most were susceptible to I. Most barley varieties (Hordeum **vulgare**, H. deficiens, H. distichon, and H. irrugulare) were sensitive to both DDT and I. Very few of the rye (Secale cereale and S. segetale) varieties, and none of the wheat (Triticum aestivum and T. durum), were susceptible to DDT; rye showed a mixed response to I, whereas wheat was mostly resistant. There was little sensitivity to DDT in maize,

but some varieties were susceptible to I. Although the mode of action of DDT and I is similar, differences in varietal response to the 2 **pesticides** suggests that different genes may be implicated in resistance.

L18 ANSWER 13 OF 13 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1979:485262 HCAPLUS
DOCUMENT NUMBER: 91:85262
TITLE: Design and evaluation of a terrestrial model ecosystem for evaluation of substitute pesticide chemicals
AUTHOR(S): Metcalf, Robert L.; Cole, Larry K.; Wood, Susanne G.; Mandel, Douglas J.; Milbrath, Mary L.
CORPORATE SOURCE: Inst. Environ. Stud., Univ. Illinois, Urbana, IL, USA
SOURCE: Report (1979), EPA/600/3-79/004; Order No. PB-293167, 308 pp. Avail.: NTIS
From: Gov. Rep. Announce. Index (U. S.) 1979, 79(14), 64
DOCUMENT TYPE: Report
LANGUAGE: English
AB A terrestrial model ecosystem that was simple, inexpensive, and suitable for examg. the total environmental fate of radiolabeled **pesticides** in a soil crop model (e.g., soil-corn or soil-soybean) was accomplished with the practical development of a system in which corn or soybeans are grown on 3 kg of typical Illinois soil types contained in a 19-L wide-mouth glass carboy fitted with airtight lid and impingers to sample **pesticide** content in aspirated air, and a bottom petcock to sample leachate water. The units are housed in an environmental growth chamber under 12 h simulated daylight, at 26.degree.. The fate of the **pesticide** chem. and its degrdn. products in soil, air, water, phytoplankton, and in the major food chain organisms of the model ecosystems (e.g., Zea mays, Glycine max, Lumbricus terrestris, Limax maximus, Armadillidium **vulgare**, Estigmene acrea, and Microtus ochregaster in the soil-plant phase, and Daphnia magna, Culex pipiens quinquefasciatus, Physa species, and Gambusia affinis in the leachate water) was traced. The C-labeled **pesticides** examd. included DDT [50-29-3], methoxychlor [**72-43-5**], aldrin [309-00-2], dieldrin [60-57-1], fonofos [944-22-9], phorate [298-02-2], parathion [56-38-2], methylparathion [298-00-0], simazine [122-34-9], trifluralin [1582-09-8], 2,4,5-T isooctyl ester [25168-15-4], hexachlorobenzene [118-74-1], pentachlorophenol [87-86-5], pentachloronitrobenzene [82-68-8], and captan [133-06-2].

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L13          6790 SEA FILE=REGISTRY ABB=ON  PLU=ON  CADIDENE OR CAMPHENE OR
                  CAMPHOR OR CARENE OR CARYOPHYLLENE OR CARVONE OR CARVACROL OR
                  CARYOPHYLLENE OR CINNAMIC(W)ALDEHYDE OR CITRAL OR CITRONELLAL
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L14        231798 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L13 OR CADIDENE OR CAMPHENE
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                  OR CARYOPHYLLENE OR CINNAMIC(W)ALDEHYDE OR CITRAL OR CITRONELLA
                  L OR CINEOL OR ANISOLE OR CARYOPHYLLENE OR CINEOLE OR CYMEME
L15          7857 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L14 AND (REPEL? INSECTICIDE?
                  OR APHICIDE? OR ACARICIDE? OR ANTIBACTERIAL(W) AGENT OR
                  FUNGICIDE  OR NEMATOCIDE? OR PESTICIDE? OR TERMITICIDE?)
L16          1553 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L14 (L)(REPEL? INSECTICIDE?
                  OR APHICIDE? OR ACARICIDE? OR ANTIBACTERIAL(W) AGENT OR
                  FUNGICIDE  OR NEMATOCIDE? OR PESTICIDE? OR TERMITICIDE?)
L17           750 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L14(L)(LABIATAE OR  UMBELLIFER
                  A OR THYMBRA OR  SATUREJA OR ORIGANUM OR  CORYDOTHYMUS OR
                  PINPINELLA OR FOENICULUM OR SPICATA OR MAJORANA OR CAPITATUS
                  OR VULGARE OR SOLYMICUM OR SPYLEUM OR BILGERI OR MINUTIFLORUM
                  OR ACCATUM OR SRIACUM OR ONITES OR ANISUM)
L18            13 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L17 AND L16
L19          1261 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L14 AND (LABIATAE OR
                  UMBELLIFERA OR THYMBRA OR  SATUREJA OR ORIGANUM OR  CORYDOTHYMU
                  S OR PINPINELLA OR FOENICULUM OR SPICATA OR MAJORANA OR
                  CAPITATUS OR VULGARE OR SOLYMICUM OR SPYLEUM OR BILGERI OR
                  MINUTIFLORUM OR ACCATUM OR SRIACUM OR ONITES OR ANISUM)
L20          103 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L15 AND L19
L21           90 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L20 NOT L18
L22           30 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L21 AND PD=<OCTOBER 10, 1998


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=> d ibib abs hitrn l22 1-30

L22  ANSWER 1 OF 30. HCAPLUS  COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER:        1999:458517  HCAPLUS
DOCUMENT NUMBER:         132:69047
TITLE:                   A comparative study of the essential oils from certain
                         Mentha and Salvia species grown in Egypt
AUTHOR(S):               Soliman, F. M.; El-Sohly, M. A.; Fathy, M. M.;
                         El-Sakhawy, F. S.
CORPORATE SOURCE:        Department of Pharmacognosy, Faculty of Pharmacy,
                         Kasr-El-Ainy, Cairo, 11562, Egypt
SOURCE:                  Egyptian Journal of Pharmaceutical Sciences (
                         1998), Volume Date 1997, 38(4-6), 553-564
                         CODEN: EJPSBZ; ISSN: 0301-5068
PUBLISHER:               National Information and Documentation Centre
DOCUMENT TYPE:           Journal
LANGUAGE:                English
AB   The compn. of the hydrodistd. essential oils obtained from of the leaves
     of three Mentha species viz. M.longifolia L.(Huds.) subspecies schimperi,
     (Briq.) Harley, M.piperita L. and M.spicata L. and two samples
     of Salvia officinalis L. collected from different locations were analyzed
     by gas chromatog.-mass spectroscopic techniques (GC-MS). Piperitenone was
     the major constituent of M. longifolia L. oil (21.57%) followed by
     isoborneol (13.84%) and 1,8-cineole (11.63%). L-Menthone
     (22.91%) constituted the main component of M. piperita L. oil followed by
     cis-myrtanol (13.55%) and menthofuran (13.34%). While pulegone amounted
     42.54% of the essential oil of M. spicata L. followed by 1,8-
     cineole (13.45%). Concerning the essential oil of S.officinalis
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L. (Giza), .alpha. - thujone (17.72%) was the major component followed by **camphor** (13.29%) and 1,8-**cineole** (9.38%). **Camphor** (33.35%) constituted the main component of S. officinalis L. oil collected from Sinai followed by .alpha.-thujone (18.87%) and 1,8-**cineole** (8.86%). Antimicrobial screening showed that M. longifolia L. (Huds.) oil has a powerful antimicrobial activity, while M. **spicata** L. showed a moderate activity. On the other hand, most of the tested microorganisms were resistant to M. piperita L. volatile oil. The essential oil of S. officinalis L. obtained from Sinai showed a powerful antimicrobial activity against most of the tested microorganisms. S. officinalis L. (Giza) showed only a slight antimicrobial activity.

IT **76-22-2, Camphor 79-92-5, Camphene**
87-44-5, .beta.-**Caryophyllene 89-83-8,** Thymol
99-49-0, Carvone 140-67-0, Estragole
470-82-6, 1,8-**Cineole 499-75-2,**
Carvacrol 1139-30-6, Caryophyllene oxide
5794-03-6, (+)-**Camphene 5948-04-9,**
trans-Dihydrocarvone **6753-98-6,** .alpha.-Humulene
RL: BOC (Biological occurrence); BSU (Biological study, unclassified); BIOL (Biological study); OCCU (Occurrence)
(comparison of essential oils from certain Mentha and Salvia species grown in Egypt)

REFERENCE COUNT: 40 THERE ARE 40 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L22 ANSWER 2 OF 30 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1999:110802 HCAPLUS
DOCUMENT NUMBER: 130:308935
TITLE: Fungitoxicity of essential oils of some aromatic plants against sugarcane pathogens
AUTHOR(S): Singh, S. P.; Rao, G. P.; Upadhyaya, P. P.
CORPORATE SOURCE: Department of Botany, University of Gorakhpur, Gorakhpur, 273009, India
SOURCE: Sugar Cane (Port Talbot, United Kingdom) (**1998**), (2), 14-17
CODEN: SUCAEE; ISSN: 0265-7406
PUBLISHER: International Media Ltd.
DOCUMENT TYPE: Journal
LANGUAGE: English

AB Essential oils extd. from various parts of eleven higher plants were screened, in-vitro, for their fungitoxicity against a range of fungal sugarcane pathogens. Lippia alba oil proved to be the most effective: fungistatic against Colletotrichum falcatum and C. pallescens at 700 ppm or less, and fungicidal at higher concns. against all the other test pathogens (Fusarium moniliforme, Ceratocystis paradoxa, Rhizoctonia solani, Curvularia lunata, Periconia atropurpuria and Epicoccum nigrum). Essential oils extd. from the leaves of Ocimum canum and the seeds of Anethum graveolens and Pimpenella **anisum** completely inhibited all the test fungi at 3,000 ppm. P. **anisum** oil showed fungicidal activity at 3,000 ppm against Colletotrichum falcatum, R. solani and Colletotrichum paradoxa. The fungitoxicity of Lippia oil was thermostable and its toxicity remained unchanged on autoclaving and storage for up to 300 days at 4.degree.C. The oil also proved superior to certain synthetic com. **fungicides**. GC/MS anal. of Lippia oil showed limonene (at 12.6%) and piperitone (at 19%) to be major chem. constituents. Piperitone was found to be strongly toxic even at 200 ppm.

IT **87-44-5, Caryophyllene 470-82-6,** 1,8-**Cineole**
RL: BOC (Biological occurrence); BSU (Biological study, unclassified); BIOL (Biological study); OCCU (Occurrence)
(volatile components of Lippia alba Oil)

REFERENCE COUNT: 12 THERE ARE 12 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L22 ANSWER 3 OF 30 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1998:661494 HCAPLUS
DOCUMENT NUMBER: 129:298375
TITLE: Antimicrobial prevention and treatment of human immunodeficiency virus and other infectious diseases
INVENTOR(S): Squires, Meryl
PATENT ASSIGNEE(S): USA
SOURCE: PCT Int. Appl., 99 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 5
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE	
WO 9842188	A1	19981001	WO 1998-US5792	19980324	<--
W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, GM, GW, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM					
RW: GH, GM, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG					
US 6350784	B1	20020226	US 1997-824041	19970326	
AU 9867718	A1	19981020	AU 1998-67718	19980324	
AU 727339	B2	20001207			
BR 9807892	A	20000222	BR 1998-7892	19980324	
EP 980203	A1	20000223	EP 1998-913086	19980324	
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO					
EE 9900436	A	20000417	EE 1999-436	19980324	
NZ 500002	A	20010928	NZ 1998-500002	19980324	
JP 2001527541	T2	20011225	JP 1998-545926	19980324	
NO 9904639	A	19991124	NO 1999-4639	19990924	
MX 9908750	A	20000331	MX 1999-8750	19990924	
BG 63612	B1	20020731	BG 1999-103786	19991007	

PRIORITY APPLN. INFO.:

US 1997-824041	A	19970326	
US 1996-600217	A2	19960212	
US 1996-646988	A2	19960508	
WO 1998-US5792	W	19980324	

AB An improved medical treatment and medicine is provided to quickly and safely resolve HIV and other microbial infections. The inexpensive medicine can be self administered and maintained for the prescribed time. The attractive medicine comprises an antimicrobial conc. comprising microbe inhibitors, phytochems. or isolates. Desirably, the effective medicine comprises a surfactant and an aq. carrier or solvent and a nutrient. In the preferred form, the medicine comprises: Echinacea and Commiphora myrrha phytochems., benzalkonium chloride, a sterile water soln., and folic acid.

IT **87-44-5**, **Caryophyllene** **97-53-0**, Eugenol
104-55-2, Cinnamaldehyde **1139-30-6**,
Caryophyllene epoxide
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(antimicrobial prevention and treatment of human immunodeficiency virus and other infectious diseases)

REFERENCE COUNT: 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L22 ANSWER 4 OF 30 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1998:404566 HCAPLUS
DOCUMENT NUMBER: 129:173042
TITLE: Antibacterial activity of essential oils from aromatic plants growing in Chile
AUTHOR(S): Montes, M. A.; Wilkomirsky, T.; Bello, H.
CORPORATE SOURCE: Faculty of Pharmacy, University of Concepcion, Concepcion, Chile
SOURCE: Fitoterapia (**1998**), 69(2), 170-172
CODEN: FTRPAE; ISSN: 0367-326X
PUBLISHER: IdB Holding SpA
DOCUMENT TYPE: Journal
LANGUAGE: English
AB The antimicrobial activity and the chem. constituents of essential oils from flowering parts of Mentha pulegium, Mentha **spicata**, **Origanum vulgare**, and Rosmarinus officinalis were analyzed. All tested essential oils showed some degree of antimicrobial activity on the microorganisms used. **Origanum vulgare** essential oil was the most active, with a MBC90 of 7.4 mg/mL.
IT **76-22-2**, **Camphor** **79-92-5**, **Camphene** **89-78-1**, Menthol **99-49-0**, **Carvone** **470-82-6**, **Cineol** **499-75-2**, **Carvacrol** **5392-40-5**, **Citral** **5948-04-9**, Dihydrocarvone
RL: BOC (Biological occurrence); BSU (Biological study, unclassified); BIOL (Biological study); OCCU (Occurrence)
(essential oil constituents from Mentha, **Origanum**, and Rosmarinus)
REFERENCE COUNT: 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L22 ANSWER 5 OF 30 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1998:362849 HCAPLUS
DOCUMENT NUMBER: 129:71915
TITLE: Relationship between bioactivity and chemical composition of commercial essential oils
AUTHOR(S): Lis-Balchin, Maria; Deans, Stanley G.; Eaglesham, Elizabeth
CORPORATE SOURCE: School of Applied Science, South Bank University, London, SE1 0AA, UK
SOURCE: Flavour and Fragrance Journal (**1998**), 13(2), 98-104
CODEN: FFJOED; ISSN: 0882-5734
PUBLISHER: John Wiley & Sons Ltd.
DOCUMENT TYPE: Journal
LANGUAGE: English
AB To establish the value of the use of biol. activities as accessory criteria (in conjunction with gas chromatog., but in the absence of enantiomeric anal.) for establishing the authenticity of essential oils, the biol. activities of 105 com. essential oils were studied against 25 species of bacteria, 20 strains of Listeria monocytogenes, and three filamentous fungi; their antioxidant action was also detd. and all the results were related to the actual chem. compn. of the oils as detd. by gas chromatog. The results showed some relation between the major components and some bioactivities. There was a neg. correlation between 1,8-**cineole** content and antifungal activity. There was, however, great variability between the biol. action of different samples of individual oils and groups of oils under the same general name, e.g. lavender, eucalyptus or chamomile, which was reflected in differences in chem. compn., The results suggest that, although the biol. activities are not all related to the main components, any significant blending, rectification and adulteration of com. oils can be monitored by their biol. activities. The use of essential oils named simply as chamomile or eucalyptus, or any com. oil which was adulterated, cannot be justifiably

used in treating medical conditions unless the action is nonspecific and independent of the chem. compn.

IT **76-22-2P, Camphor**
RL: ADV (Adverse effect, including toxicity); ANT (Analyte); BAC (Biological activity or effector, except adverse); BOC (Biological occurrence); BSU (Biological study, unclassified); PRP (Properties); PUR (Purification or recovery); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); OCCU (Occurrence); PREP (Preparation); USES (Uses)
(relationship between bioactivity and chem. compn. of com. essential oils)

REFERENCE COUNT: 20 THERE ARE 20 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L22 ANSWER 6 OF 30 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1998:197364 HCAPLUS
DOCUMENT NUMBER: 128:266235
TITLE: Antimicrobial treatment for herpes simplex virus and other infectious diseases
INVENTOR(S): Squires, Meryl
PATENT ASSIGNEE(S): Squires, Meryl, USA
SOURCE: PCT Int. Appl., 57 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 5
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE	
WO 9811778	A1	19980326	WO 1997-US2468	19970312	<--
W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, HU, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, TJ, TM, TR, TT, UA, UG, UZ, VN, YU, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM					
RW: GH, KE, LS, MW, SD, SZ, UG, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG					
US 6355684	B1	20020312	US 1996-646988	19960508	
AU 9737153	A1	19980414	AU 1997-37153	19970312	<--
AU 716247	B2	20000224			
EP 918458	A1	19990602	EP 1997-933985	19970312	
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO					
CN 1223546	A	19990721	CN 1997-195836	19970312	
CN 1113599	B	20030709			
BR 9711086	A	20000111	BR 1997-11086	19970312	
JP 2001505546	T2	20010424	JP 1998-514630	19970312	
NO 9805200	A	19990108	NO 1998-5200	19981106	

PRIORITY APPLN. INFO.:

US 1996-646988	A	19960508
US 1990-595424	B1	19901011
US 1996-600217	A2	19960212
WO 1997-US2468	W	19970312

AB An improved medical treatment and medicine is provided to quickly and safely resolve herpes and other microbial infections. The inexpensive user-friendly medicine can be applied and maintained on the infected region until the phys. symptoms of the disease disappears and the patient is comfortable and has a normal appearance. The attractive medicine comprises an antimicrobial conc. comprising microbe inhibitors, phytochems., or isolates. Desirably, the effective medicine comprises a surfactant and an aq. carrier or solvent. In the preferred form, the medicine comprises Echinacea phytochems. and benzalkonium chloride in a

sterile water soln.
IT **87-44-5, Caryophyllene 87-44-5D, Caryophyllene,** derivs. **1139-30-6, Caryophyllene** epoxide
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(antimicrobial treatment for herpes simplex virus and other infectious diseases)
REFERENCE COUNT: 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L22 ANSWER 7 OF 30 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1998:130252 HCAPLUS
DOCUMENT NUMBER: 128:202929
TITLE: Research for the development of natural antimicrobial materials. I. -antimicrobial activity and effective constituents in Mosla chinensis maxim
AUTHOR(S): Furuya, Tsutomu; Matsuura, Youichi; Mizobata, Satoshi; Takahara, Sumio; Takahashi, Kazuhisa
CORPORATE SOURCE: Faculty of Science, Okayama University of Science, Japan
SOURCE: Nippon Shokuhin Kagaku Gakkaishi (**1997**), 4(2), 114-119
CODEN: NSKGF4; ISSN: 1341-2094
PUBLISHER: Nippon Shokuhin Kagaku Gakkai
DOCUMENT TYPE: Journal
LANGUAGE: Japanese
AB In order to screen for natural antimicrobial compds., we carried out halo tests filter paper disks against ten species of microorganisms at 500mg/mL of exts. obtained from about two hundred plants. Although most exts. were effective against bacteria, the methanol ext. of Mosla chinensis Maxim. (Hosoba-yamajiso in Japanese. **Labiatae**) proved highly inhibitory against not only bacteria but also yeast and fungi (Table 1). Partitioning between H2O and three successive solvents, hexane, CHCl3 and EtOAc, and MIC* testing against twenty-three species of microorganisms revealed the hexane fraction to exhibit the strongest antimicrobial activity. I.e., the MIC values with this fraction were found at the lowest concn. and comparison of the diam. of zone inhibition at the same concn., demonstrated the hexane fraction to exert the greatest effects against almost all species of microorganisms. Plants of **Labiatae**, esp. such as Thymus, **Origanum** and **Satureja** used as spices and food additives, contain essential oils, whose constituents such as thymol, **carvacrol** and eugenol are known to possess antimicrobial activity. A comparison of antimicrobial activities using the MIC test showed that the methanol ext. of M. chinensis was more inhibitory against all species of microorganisms than that of Th.vulgaris. In addn., thymol exhibited a wide spectrum of antimicrobial activities, similar to these for M. chinensis (Table 2). Hexane fractions from the leaves, stems flowers and roots of M. Chinensis collected during June to August, were analyzed by GLC in order to det. their volatile constituents, and thymol was detected in all fractions. The content of thymol in leaves, 4.43-13.03% was overwhelmingly higher than in other parts, and max. levels were obsd. in leaves collected in August(Table 3). Furthermore, antimicrobial activities of exts. detd. by MIC testing were proportional to the thymol content. In conclusion, constituents of the hexane fraction contg. essential oils, are the main factors responsible for antimicrobial activity of M. chinensis. The results further suggest the participation of thymol in inhibitory effects against microorganisms.
IT **89-83-8,** Thymol **499-75-2, Carvacrol**
RL: ANT (Analyte); BOC (Biological occurrence); BSU (Biological study, unclassified); BUU (Biological use, unclassified); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); OCCU (Occurrence); USES

(Uses)
(research for development of natural antimicrobial materials in Mosla chinensis maxim)

L22 ANSWER 8 OF 30 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1997:673976 HCAPLUS
DOCUMENT NUMBER: 127:328410
TITLE: Constituents and biological activities of volatile oil of some Lamiacae plants as affected by irradiation
AUTHOR(S): Omer, E. A.; El-Bazza, Z. E.; Eggbo, Z. G.
CORPORATE SOURCE: Pharmaceutical Sciences Department, National Research Centre Dokki and National Centre for Radiation Research and Technology, Cairo, Egypt
SOURCE: Egyptian Journal of Horticulture (**1997**), 24(2), 175-196
CODEN: EJHCAE; ISSN: 0301-8164
PUBLISHER: National Information and Documentation Centre
DOCUMENT TYPE: Journal
LANGUAGE: English
AB The essential oils of sweet marjoram, spearmint and thyme herbs were extd. by hydrodistn. GLC anal. for the constituents of each essential oil were carried out. The essential oils were found to possess antifungal activities against two strains of Aspergillus niger and one strain of Asp. ochraceus and antibacterial activity against Bacillus megaterium, B. pantothenticus and B. brevis. The oils extd. from non-irradiated (control) herbs were found to inhibit the growth of radioresistant microbial strains. The oils from irradiated herbs have antiaflatoxigenic activities against Asp. parasiticus NRRI 3145. No significant change was noticed for antifungal and antiaflatoxigenic activities of essential oils extd. from herbs before and after exposure to gamma radiation.
IT **79-92-5, Camphene 87-44-5**, .beta.-**Caryophyllene 89-83-8**, Thymol **99-49-0**, **Carvone 470-82-6**, 1,8-**Cineole 499-70-7**, Carvomenthone **499-75-2**, **Carvacrol 5948-04-9**, Dihydrocarvone
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(constituents and biol. activities of volatile oil of some Lamiacae plants as affected by irradn.)

L22 ANSWER 9 OF 30 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1996:763827 HCAPLUS
DOCUMENT NUMBER: 126:79812
TITLE: Chemical composition and antimicrobial activities of two aromatic plants: **Origanum majorana** L. and O. compactum Benth
AUTHOR(S): Charai, Malika; Mosaddak, Mahjouba; Faid, M.
CORPORATE SOURCE: Dep. Chim. Fac. Sci., Univ. Mohamed, Rabat, 1014, Morocco
SOURCE: Journal of Essential Oil Research (**1996**), 8(6), 657-664
CODEN: JEOREG; ISSN: 1041-2905
PUBLISHER: Allured
DOCUMENT TYPE: Journal
LANGUAGE: English
AB The essential oils obtained by steam distn. of **Origanum** compactum and O. **majorana**, which were grown in Morocco, were examd. by gas chromatog. to det. their major constituents. The major constituents of O. compactum were **carvacrol** (49.52%), p-cymene (21.22%) and .gamma.-terpinene (14.21%), while the major constituents of the O. **majorana** were linalool (32.68%) and terpinene-4-ol (32.30%). The oils, dried whole plants, and aq. exts. derived from the leaves were examd. for their antimicrobial activities on molds, yeasts and

bacteria. The Minimal Inhibitory Concn. (MIC) was detd. in every case. A total inhibition (100%) was obtained with the O. compactum oil at the concn. of 4 ppm on all the microbial species, while O. **majorana** oil totally inhibited yeasts and lactic acid bacteria at a concn. of 5 ppm. Aq. exts. of the two plants were less inhibitory than their essential oils. The entire plants were also inhibitory to some strains of yeasts, molds and bacteria, and O. compactum was more inhibitory than O. **majorana**.

IT **499-75-2, Carvacrol**
RL: BAC (Biological activity or effector, except adverse); BOC (Biological occurrence); BSU (Biological study, unclassified); BIOL (Biological study); OCCU (Occurrence)
(chem. compn. and antimicrobial activities of **Origanum majorana** and O. compactum oils)

L22 ANSWER 10 OF 30 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1996:607589 HCAPLUS
DOCUMENT NUMBER: 125:246102
TITLE: Process for removing unwanted lipophilic impurity or residue from drinks or vegetable preparations
INVENTOR(S): Kreuter, Matthias-Heinrich; Steiner, Rudolf
PATENT ASSIGNEE(S): Emil Flachsmann Ag, Switz.
SOURCE: Eur. Pat. Appl., 9 pp.
CODEN: EPXXDW
DOCUMENT TYPE: Patent
LANGUAGE: German
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE	
EP 730830	A1	19960911	EP 1996-103445	19960306	<--
EP 730830	B1	20020206			
R: AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LI, LU, MC, NL, PT, SE					
CH 688604	A	19971215	CH 1995-629	19950306	<--
CH 689818	A	19991215	CH 1995-1621	19950602	
AU 9647909	A1	19960919	AU 1996-47909	19960306	<--
AU 678929	B2	19970612			
ZA 9601817	A	19960930	ZA 1996-1817	19960306	<--
CN 1141205	A	19970129	CN 1996-106030	19960306	<--
IN 181360	A	19980530	IN 1996-CA408	19960306	<--
US 5906848	A	19990525	US 1996-611687	19960306	
AT 212790	E	20020215	AT 1996-103445	19960306	
PT 730830	T	20020731	PT 1996-96103445	19960306	
ES 2093589	T3	20020916	ES 1996-103445	19960306	
US 6024998	A	20000215	US 1998-208004	19981209	

PRIORITY APPLN. INFO.:
CH 1995-629 A 19950306
CH 1995-1621 A 19950602
US 1996-611687 A1 19960306

AB Lipophilic impurities or residues such as **pesticides**, org. solvents, arom. org. compds., etc. are removed from beverages and juices or plant exts. and prepns. by mixing with a lipophilic phase to carry the lipophilic impurities and later sepn. of this phase from the desired product.

IT **72-43-5**, Methoxychlor **1825-21-4**, Pentachloroanisole
RL: POL (Pollutant); REM (Removal or disposal); OCCU (Occurrence); PROC (Process)
(process for removing unwanted lipophilic impurity or residue from drinks or vegetable prepns.)

L22 ANSWER 11 OF 30 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1995:998461 HCAPLUS

DOCUMENT NUMBER: 124:25417
TITLE: Antifungal activity of the essential oil of **Origanum** syriacum L.
AUTHOR(S): Daouk, Rasha K.; Dagher, Shawky M.; Sattout, Elsa J.
CORPORATE SOURCE: Faculty of Arts and Sciences, American University of Beirut, Beirut, Lebanon
SOURCE: Journal of Food Protection (**1995**), 58(10), 1147-9
CODEN: JFPRDR; ISSN: 0362-028X
PUBLISHER: International Association of Milk, Food and Environmental Sanitarians
DOCUMENT TYPE: Journal
LANGUAGE: English

AB The volatile oil of the Lebanese Za'atar (**Origanum** syriacum L.) was characterized for its thymol and **carvacrol** content using gas-liq. chromatog. These two compds. constituted the major components of the oil and were present in equal proportions of 30% in the volatile oil extd. from the leaves and shoot tips of the **Origanum** plant during the preflowering stage. The percentage of **carvacrol** in the essential oil increased to 62% after flowering and maturation, while the concn. of thymol decreased to 14%. **Origanum** oil extd. from plants collected during midseason was evaluated for its antifungal activity against Aspergillus niger, Fusarium oxysporum, and Penicillium species. The oil exhibited strong inhibitory action against the three fungi tested. The min. inhibitory concn. (MIC) of the oil was found to be 0.1 .mu.l/mL of yeast ext. sucrose broth for the fungi tested. It is concluded that the essential oil of Lebanese Za'atar is a potent mold inhibitor which can be employed as a food preservative.

IT **89-83-8**, Thymol **499-75-2**, **Carvacrol**
RL: BAC (Biological activity or effector, except adverse); BOC (Biological occurrence); BSU (Biological study, unclassified); FFD (Food or feed use); BIOL (Biological study); OCCU (Occurrence); USES (Uses)
(antifungal activity of the essential oil of **Origanum** syriacum)

L22 ANSWER 12 OF 30 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1995:831372 HCAPLUS
DOCUMENT NUMBER: 123:220772
TITLE: Characterization of fungistatic and bacteriostatic activities of four essential oils rich in lactones (Elecampane, Catnip, Eupatorium cannabinum, Tansy)
AUTHOR(S): Perineau, F.; Bourrel, C.; Gaset, A.
CORPORATE SOURCE: Lab. Chimie Agroressources, Ecole Natl. Superieure Chime Toulouse, Toulouse, 31077, Fr.
SOURCE: Rivista Italiana EPPOS (**1993**), 4(Spec. Num.), 695-703
CODEN: RIEPD7; ISSN: 0392-0445
PUBLISHER: Rivista Italiana EPPOS
DOCUMENT TYPE: Journal
LANGUAGE: French

AB Research of natural products with biol. activity, led to test the activity of several essential oils towards five bacteria (according to the AFNOR NFT 72-150 std.) and seven pathogen fungi. In a preliminary test the authors studied the chem. compn. of the essential oils which are slightly known:. Elecampane (Inula helenium) has sesquiterpenoid lactones as alantolactone, isoalantolactone, dihydroalantolactone and other minority isomers which represent up to 80% of the oil, - Catnip (Nepeta cataria) has nepetalactones (about 70% of hydrodistd. compds.), - Eupatorium cannabinum, with 4 g. of lactones, extd. from 1 kg of raw material, among which, eupatolide and alanctolactones also found in Elecampane, - Tansy (Tanacetum **vulgare**), from which can be extd. 6 g of lactones per kg of fresh plant, principally parthenolide. These 4 plants and more particularly the different lactones reported, have been considered for

their bacteriostatic and fungistatic activities. The biostatic activity variation will be correlated to the chem. compn. and to the different sesquiterpenoid lactones of the studied essential oils. The activity levels (minimal inhibitory concns.) are found between 67.5 and 2000 .mu.g/mL according to the strains and are comparable to oils or constituents known to be active like essential oils of Eucalyptus (Eucalyptus globulus), Thyme (Thymus vulgaris), Clary sage (Salvia sclarea), and Eugenol, **Citral**, p-cymene, **Camphor**.

IT **546-43-0**, Alantolactone
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BIOL (Biological study)
(fungistatic and bacteriostatic activities of essential oils rich in)

L22 ANSWER 13 OF 30 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1995:831359 HCAPLUS
DOCUMENT NUMBER: 123:220771
TITLE: Antifungal activity of **carvacrol** chemotypes of winter savory harvested in central Italy
AUTHOR(S): Menphini, Alessandro; Pagiotti, Rita; Capuccella, Marinella
CORPORATE SOURCE: Dep. Plant Biol., Inst. Micrology, Perugia, 06121, Italy
SOURCE: Rivista Italiana EPPOS (**1993**), 4(Spec. Num.), 566-71
CODEN: RIEPD7; ISSN: 0392-0445
PUBLISHER: Rivista Italiana EPPOS
DOCUMENT TYPE: Journal
LANGUAGE: French

AB It has been shown that a large no. of plants possess antifungal activity. In the present study the authors report on the activity of the essential oil of winter savory (**Satureja** montana L., **Labiatae**) harvested in four localities of Central Italy, where this species is well-known for its domestic use in the kitchen as well as in traditional medical treatment (antiseptic, expectorant, anthelmintic, carminative, stomachic, stimulant). The essential oil was obtained by hydrodistn. of flowers and leaves from plants in full bloom. The oil compds. were analyzed by GC. **Carvacrol** represented 25-40% of the oil compn. In accordance with other Italian chemotypes.1,2,3. The essential oil was tested against Candida albicans, Trichophyton menthagrophytes, Trichoderma viride, Mucor plumbeus and Botrytis cinerea. For the study of antifungal activity, Sabouraud medium (Biolife) was used. Cultures were grown at 25.degree.. Diams. of the inhibition zones were recorded after incubation for 24 and 48 h. Each test was repeated twice. Light and TEM-SEM morphol. modifications were also obsd. The screening for antifungal activity appeared to exert a strong effect as quantities of oil less than 3 .mu.l oil were found sufficiently potent to inhibit the growth of all the colonies within 48 h. The essential oil of S. montana definitely halted mycelium proliferation. The activity of some essential oil compds. (**carvacrol**, thymol, linalool, p-cymene, etc.) was tested. **Carvacrol** showed a very strong antifungal action at 0.1 .mu.l. The light and ultrastructural observations showed morphol. modifications of the colonies and alterations of the cytol. structures. The results on the antifungal action of S. montana are promising. Now the authors plan to test S. montana essential oil at lower concns. and by different methods of treatment. However, the demonstrated antimycotic activity of S. montana essential oil could explain the use of this species in folk medicine due to its antiseptic properties.

IT **89-83-8**, Thymol **499-75-2**, **Carvacrol**
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BIOL (Biological study)
(antifungal activity of essential oil of winter savory)

L22 ANSWER 14 OF 30 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1995:649331 HCAPLUS
DOCUMENT NUMBER: 123:52084
TITLE: Antifungal properties of essential oils and their main components upon Cryptococcus neoformans
AUTHOR(S): Viollon, Catherine; Chaumont, Jean-Pierre
CORPORATE SOURCE: Laboratory Botany, Faculty Medicine and Pharmacy, Besancon, Fr.
SOURCE: Mycopathologia (**1994**), 128(3), 151-3
CODEN: MYCPAH; ISSN: 0301-486X
DOCUMENT TYPE: Journal
LANGUAGE: English

AB Cryptococcus neoformans opportunistic fungus present in the last phases of AIDS is inhibited in vitro by several essential oils on natural volatile compds. The minimal inhibitory concn. may reach 100 .mu.1/L and the minimal fungicidal concn. 200 .mu.1/1 with palmarosa or cinnamon oil. Among phenolic compds., thymol and **carvacrol** were the most fungitoxic. Terpenoids, **citral**, geraniol, and citronellol showed the best activities.

IT **89-83-8**, Thymol **97-53-0**, Eugenol **99-49-0**, **Carvone 499-75-2**, **Carvacrol 5392-40-5**, **Citral**
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(antifungal properties of essential oils and their main components on Cryptococcus neoformans)

L22 ANSWER 15 OF 30 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1995:475187 HCAPLUS
DOCUMENT NUMBER: 122:238209
TITLE: Antifungal activity of oregano and thyme essential oils applied as fumigants against fungi attacking stored grain
AUTHOR(S): Paster, Nachman; Menasherov, Mazal; Ravid, Uzi; Juven, Benjamin
CORPORATE SOURCE: Department of Stored Products, Volcani Center, Bet Dagan, 50250, Israel
SOURCE: Journal of Food Protection (**1995**), 58(1), 81-5
CODEN: JFPRDR; ISSN: 0362-028X
DOCUMENT TYPE: Journal
LANGUAGE: English

AB Essential oils from oregano and thyme were applied for 24 h as fumigants against the mycelia and spores of Aspergillus flavus, Aspergillus niger and Aspergillus ochraceus, as well as against natural microflora of wheat grains. The minimal inhibitory concn. (MIC) of oregano oil needed to inhibit the mycelial growth of the fungi was 2.0 .mu.L/L, while spores were eradicated following exposure to 2.0 to 2.5 .mu.L/L. The thyme essential oil was less efficient in controlling mycelia and growth was obsd. even following exposure to 4.0 .mu.L/L. However, the thyme essential oil was fungitoxic to spores (MIC= 3.0 .mu.L/L). In another set of trials the efficacy of the oils and two of their constituents (**carvacrol** and thymol) in controlling natural microflora of surface-sterilized wheat grain was studied. Of the four materials investigated, only oregano essential oil exhibited fungicidal activity and, following 24 h exposure to 20 .mu.L/L, a significant redn. in the percent of infested grain was obsd. even after 5 days of incubation on potato dextrose agar. A redn. in the germinability of the grains was evident following exposure to the materials tested. When the fungicidal activity of oregano essential oil was evaluated using grains with different moisture contents (MC), data revealed that the better inhibitory effect was achieved in grain with a high MC. The findings emphasize the toxicity of oregano and thyme essential oils as fumigants against fungi

attacking stored grain and strengthen the possibility of using them as an alternative to chems. for preserving stored grains.

IT **89-83-8**, Thymol **499-75-2, Carvacrol**
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); FFD (Food or feed use); BIOL (Biological study); USES (Uses)
(antifungal activity of oregano and thyme essential oils applied as fumigants against fungi attacking stored grain)

L22 ANSWER 16 OF 30 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1995:185107 HCAPLUS
DOCUMENT NUMBER: 122:16942
TITLE: Extracts and fractions of Thymus **capitatus** exhibit antimicrobial activities
AUTHOR(S): Kandil, O.; Radwan, N. M.; Hassan, A. B.; Amer, A. M. M.; El-Banna, H. A.; Amer, W. M. M.
CORPORATE SOURCE: Harvard Medical School, Deaconess Hospital, Boston, MA, USA
SOURCE: Journal of Ethnopharmacology (**1994**), 44(1), 19-24
CODEN: JOETD7; ISSN: 0378-8741
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Preliminary phytochem. screening of the plant T. **capitatus** exhibited the presence of saponins, resins, flavonoids, essential and fixed oils. Aq. and ethanolic exts. (10-200 mg/mL) as well as saponin, resin and essential oil of the plant (10-5000 .mu.g/mL) inhibited the growth of several bacteria and fungi.

IT **89-83-8**, 2-Isopropyl-5-methylphenol **499-75-2**, 2-Methyl-5-isopropylphenol
RL: BAC (Biological activity or effector, except adverse); BOC (Biological occurrence); BSU (Biological study, unclassified); BIOL (Biological study); OCCU (Occurrence)
(exts. and fractions of Thymus **capitatus** exhibit antimicrobial activities)

L22 ANSWER 17 OF 30 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1994:330907 HCAPLUS
DOCUMENT NUMBER: 120:330907
TITLE: Antimicrobial activity and chemical composition of essential oils from Sicilian aromatic plants
AUTHOR(S): Biondi, Daniela; Cianci, Paola; Geraci, Corrada; Ruberto, Giuseppe
CORPORATE SOURCE: Ist. Stud. Sostanze Nat. Interesse Aliment. Chim.-Farm., CNR, Valverde, I-95028, Italy
SOURCE: Flavour and Fragrance Journal (**1993**), 8(6), 331-7
CODEN: FFJOED; ISSN: 0882-5734
DOCUMENT TYPE: Journal
LANGUAGE: English
AB The essential oils from 4 Lamiaceae (**Labiatae**), **Origanum onites**, Thymus **capitatus**, com. oregano and sage, and a Lauracea, Laurus nobilis were characterized and tested against 8 bacteria (Bacillus subtilis, Escherichia coli, Hafnia alvei, Micrococcus luteus, Proteus vulgaris, Pseudomonas aeruginosa, Staphylococcus aureus, Streptococcus faecalis), and 5 fungi (Aspergillus niger, A. terreus, 2 strains of Candida albicans, Fusarium sp.). The highest and broadest activity, both antibacterial and antifungal, was shown by the oils of O. **onites**, T. **capitatus** and com. oregano, in that order, while oils from com. sage and L. nobilis were almost inactive. Bactericidal and bacteriostatic properties of the 5 essential oils are also discussed.

IT **76-22-2, Camphor 79-92-5, Camphene**

87-44-5, Caryophyllene 89-83-8, Thymol
97-53-0, Eugenol **99-49-0, Carvone**
470-82-6, 1,8-**Cineole 499-75-2,**
Carvacrol 1076-56-8, Thymol methylether
1139-30-6, Caryophyllene oxide **6379-73-3,**
Carvacrol methylether **6380-28-5,** Carvacryl acetate
6753-98-6, .alpha.-Humulene **13466-78-9,** 3-**Carene**
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BIOL (Biological study)
(of essential oils, from Sicilian arom. plants, antimicrobial activity of)

L22 ANSWER 18 OF 30 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1994:200249 HCAPLUS
DOCUMENT NUMBER: 120:200249
TITLE: Composition and antimicrobial properties of essential oils of four Mediterranean Lamiaceae
AUTHOR(S): Panizzi, L.; Flamini, G.; Cioni, P.L.; Morelli, I.
CORPORATE SOURCE: UO, Serv. Multizonale Prev. USL 13, Livorno, 57100, Italy
SOURCE: Journal of Ethnopharmacology (**1993**), 39(3), 167-70
CODEN: JOETD7; ISSN: 0378-8741
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Essential oils from **Satureja** montana, Rosmarinus officinalis, Thymus vulgaris, and Calamintha nepeta, were chem. analyzed and their antimicrobial and **fungicide** activities evaluated on the basis of their min. inhibitory concn. and min. bactericidal concn. All 4 oils had a biotoxic effect, the most active being those from Calamintha and Thymus.
IT **76-22-2, Camphor 79-92-5, Camphene**
87-44-5, .beta.-**Caryophyllene 89-78-1,** Menthol
89-83-8, Thymol **99-49-0, Carvone**
470-82-6, 1,8-**Cineol 499-75-2,**
Carvacrol
RL: BIOL (Biological study)
(of Mediterranean Lamiaceae oils, antimicrobial activity in relation to)

L22 ANSWER 19 OF 30 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1992:404262 HCAPLUS
DOCUMENT NUMBER: 117:4262
TITLE: Wild thyme, Thymus **capitatus,** essential oil seasonal changes and antimycotic activity
AUTHOR(S): Arras, G.; Grella, G. E.
CORPORATE SOURCE: Ist. Stud. Probl. Bio-Agron. Colt. Arboree Mediterr., CNR, Sassari, 07100, Italy
SOURCE: Journal of Horticultural Science (**1992**), 67(2), 197-202
CODEN: JHSCA8; ISSN: 0022-1589
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Monthly quant. and qual. changes in the essential oils of Thymus **capitatus,** growing wild in Sardinia, were studied over the two years 1987-1988, and their antimycotic activity against Penicillium italicum and Alternaria alternata was examd. Max. oil yield occurred in August, but depended upon whether leaves, flowers or residual infructescences were used. Of the eight constituents identified, the biogenetically related **carvacrol,** p-cymene and .gamma.-terpinene showed changes related to the different growth stages of the season, with **carvacrol** levels at a max. (70-80%) before and until after flowering (Apr.-Sept.); the flowers and residual infructescence contained more than the leaves. The oil proved to be fungistatic to P. italicum and

fungicidal at 400 ppm to A. alternata in August 1987 and 1988. Fungitoxic effects were mainly due to **carvacrol**, but not always in proportion to its content in the oil.

IT **87-44-5, Caryophyllene 499-75-2, Carvacrol**
RL: BIOL (Biological study)
(of Thymus **capitatus**, seasonal changes in content of, antimycotic activity in relation to)

L22 ANSWER 20 OF 30 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1990:174054 HCAPLUS
DOCUMENT NUMBER: 112:174054
TITLE: Nematocidal activity of some essential plant oils
AUTHOR(S): Sangwan, Naresh K.; Verma, Braham S.; Verma, Kailash K.; Dhindsa, Kuldip S.
CORPORATE SOURCE: Dep. Chem. Biochem., Haryana Agric. Univ., Hisar, 125 004, India
SOURCE: Pesticide Science (**1990**), 28(3), 331-5
CODEN: PSSCBG; ISSN: 0031-613X
DOCUMENT TYPE: Journal
LANGUAGE: English

AB Nematocidal activity of the essential oils of different plant species belonging to the families **Labiatae** (Ocimum basilicum, O. sanctum and Mentha piperita), Myrtaceae (Callistemon lanceolatus and Eugenia caryophyllata) and Gramineae (Cymbopogon caesius) and their major monoterpenoidal constituents, linalool, eugenol, menthol, **cineole** and geraniol was detd. against second-stage juveniles of seed-gall nematode (Anguina tritici), citrus nematode (Tylenchulus semipenetrans), root-knot nematode (Meloidogyne javanica) and pigeon pea cyst nematode (Heterodera cajani). The essential oil of E. caryophyllata and its major constituent eugenol, as well as linalool and geraniol, exhibited non-specific activity against all the four nematodes tested.

IT **97-53-0**, Eugenol **470-82-6, Cineole**
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BIOL (Biological study)
(nematocidal activity of)

L22 ANSWER 21 OF 30 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1989:611783 HCAPLUS
DOCUMENT NUMBER: 111:211783
TITLE: Phytochemical and antimicrobial analysis of essential oils
AUTHOR(S): Hethelyi, E.; Koczka, I.; Tetenyi, P.
CORPORATE SOURCE: Res. Inst. Med. Plants, Budakalasz, 2011, Hung.
SOURCE: Herba Hungarica (**1989**), 28(1-2), 99-115
CODEN: HEHUAW; ISSN: 0018-0580
DOCUMENT TYPE: Journal
LANGUAGE: English

AB The compn. and antimicrobial activity of a no. of Hungarian medicinal oils was studied. All oils were gram-pos. selective. Six of 9 oil samples caused 92-100% inhibition of the multiplication of gram-pos. bacterial. The oils also had excellent antifungal activity. Oils contg. ketones (e.g., 3-octanone, artemisia ketone, dihydrotagetone, tagetone, ocimenone, verbenone, umbellulone, piperitone, piperitenone, and **camphor**) and alcs. (e.g., artemisia alc., chrysanthenol, borneol, or myrtenol) showed excellent antimicrobial activity.

IT **87-44-5**, .beta.-**Caryophyllene**
RL: BIOL (Biological study)
(of Tagetes patula oil and Rosmarinus officinalis oils)

IT **140-67-0**, Estragol
RL: BIOL (Biological study)
(of Artemisia dracunculus oil)

IT **76-22-2, Camphor 470-82-6**, 1,8-**Cineol**

RL: BIOL (Biological study)
(of Rosmarinus officinalis oil)

L22 ANSWER 22 OF 30 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1989:141367 HCAPLUS
DOCUMENT NUMBER: 110:141367
TITLE: GC/MS investigation of antimicrobial and repellent compounds
AUTHOR(S): Hethelyi, E.; Tetenyi, P.; Kaposi, P.; Danos, B.; Kernoczi, Zs.; Buki, Gy.
CORPORATE SOURCE: Res. Inst. Med. Plants, Budakalasz, Hung.
SOURCE: Herba Hungarica (**1988**), 27(2-3), 89-105
CODEN: HEHUAW; ISSN: 0018-0580
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Chemotypes of Tanacetum **vulgare** of Hungary were identified and carveol, dihydrocarvone, umbellulone, 1,8-**cineol**, terpinen-4-ol, thymol, and .beta.-terpinyl acetate were identified. Various Tagetes oils were analyzed, and limonene, .alpha.-terpinolene, dihydrotagetone, and ocimenone were identified. The oils inhibited gram pos. bacteria and fungi. Thienyl compds. which show insecticidal and repellent effects were identified in flowers and roots of Tagetes.
IT **87-44-5**
RL: BIOL (Biological study)
(of Tagetes oils)
IT **89-83-8**, Thymol **470-82-6**, 1,8-**Cineole**
5948-04-9, Dihydrocarvone
RL: BOC (Biological occurrence); BSU (Biological study, unclassified); BIOL (Biological study); OCCU (Occurrence)
(of Tanacetum **vulgare**)

L22 ANSWER 23 OF 30 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1989:92122 HCAPLUS
DOCUMENT NUMBER: 110:92122
TITLE: Biological activity of some Malaysian plant extracts
AUTHOR(S): Sukari, Mohd Aspollah; Takahashi, Shozo
CORPORATE SOURCE: Fac. Sci. Environ. Stud., Univ. Pertanian Malaysia, Upm Serdang, 43400, Malay.
SOURCE: Pertanika (**1988**), 11(2), 249-53
CODEN: PERTDY; ISSN: 0126-6128
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Exts. from 3 Malaysian plants (**Labiatae**, including Ocimum sanctum, Mentha arvensis, and Orthoshiophon staminea, were investigated for their biol. activity. The volatile fraction of each plant was isolated and the major components were characterized by gas chromatog. (GC), GC-mass spectrometry, and NMR. The antibacterial, antifungal, and insecticidal activity, and inhibition of the germination by the volatile fraction and residue were studied.
IT **87-44-5**, .beta.-**Caryophyllene** **97-53-0**, Eugenol
RL: BIOL (Biological study)
(of Malaysian **Labiatae**, biol. activity in relation to)

L22 ANSWER 24 OF 30 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1986:466223 HCAPLUS
DOCUMENT NUMBER: 105:66223
TITLE: Essential oil of Thymus bovei Benth
AUTHOR(S): Aboutabl, E. A.; Soliman, F. M.; El-Zalabani, S. M.; Brunke, E. J.; El-Kersh, T. A.
CORPORATE SOURCE: Dep. Pharmacogn., Fac. Pharm., Cairo, 11562, Egypt
SOURCE: Scientia Pharmaceutica (**1986**), 54(1), 43-8
CODEN: SCPHA4; ISSN: 0036-8709
DOCUMENT TYPE: Journal

LANGUAGE: English
AB The essential oil of the flowering herb of T. bovei Benth. (**Labiatae**) growing in Sinai was analyzed using capillary gas chromatog.-mass spectrometry. Thirty-four components were identified in the chromatogram of the oil. Phenols and phenolic derivs. constitute 75.6% of the oil, thymol [**89-83-8**] being the major component (68.4%). The oil showed a broad and powerful antimicrobial activity. It is effective against Staphylococcus aureus, Mycobacterium phlei, Bacillus subtilis, Escherichia coli, Neisseria species and Candida albicans.
IT **79-92-5 87-44-5 89-83-8 106-26-3 141-27-5 470-82-6 499-75-2 1076-56-8 1139-30-6 6380-28-5 13466-78-9**
RL: BIOL (Biological study)
(of Thymus bovei oil)

L22 ANSWER 25 OF 30 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1986:10348 HCAPLUS
DOCUMENT NUMBER: 104:10348
TITLE: Composition of the essential oil of **Origanum majorana** grown in different localities in Turkey
AUTHOR(S): Sarer, E.; Scheffer, J. J. C.; Janssen, A. M.; Svendsen, A. Baerheim
CORPORATE SOURCE: Fac. Pharm., Ankara Univ., Ankara, Turk.
SOURCE: Essent. Oils Aromat. Plants, Proc. Int. Symp., 15th (**1985**), Meeting Date 1984, 209-12. Editor(s): Baerheim-Svendsen, A.; Scheffer, J. J. C. Nijhoff/Junk: Dordrecht, Neth.
CODEN: 54LGAU
DOCUMENT TYPE: Conference
LANGUAGE: English
AB Compn. of O. **majorana** grown in different localities in Turkey differed in the content of main components, **carvacrol** [**499-75-2**] and thymol [**89-83-8**] (48-74% and 0.5-4%, resp.,). The oils were also tested against bacteria, yeast, and some fungi, and a remarkable effect against fungi was obsd.
IT **79-92-5 89-83-8 99-49-0 470-82-6 499-75-2 554-61-0 1195-79-5 13466-78-9**
RL: BIOL (Biological study)
(of **Origanum majorana** oil, of Turkey)

L22 ANSWER 26 OF 30 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1982:91465 HCAPLUS
DOCUMENT NUMBER: 96:91465
TITLE: Study of chemotaxons of Tanacetum **vulgare** L. for their antimicrobial effect
AUTHOR(S): Tetenyi, P.; Hethelyi, E.; Kulcsar, G.; Kaposi, P.
CORPORATE SOURCE: Gyogynoveny Kut. Intez., Budakalasz, Hung.
SOURCE: Herba Hungarica (**1981**), 20(1-2), 57-74
CODEN: HEHUAW; ISSN: 0018-0580
DOCUMENT TYPE: Journal
LANGUAGE: Hungarian
AB The essential oils of 12 chemotaxonomically-different clones of T. **vulgare** were tested against 19 bacterial and 16 fungal species. Eight oils were 85-90% effective bactericides at 100 .mu.g/mL, and at 50 .mu.g/mL, all oils were 100% fungicidal. The compn. of the oils is given.
IT **76-22-2 470-82-6**
RL: BIOL (Biological study)
(of Tanacetum **vulgare** oil, bactericidal and fungicidal activity in relation to)

L22 ANSWER 27 OF 30 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1961:66970 HCAPLUS

DOCUMENT NUMBER: 55:66970
ORIGINAL REFERENCE NO.: 55:12743e-g
TITLE: Action of odoriferous organic chemicals and essential oils on wood-destroying fungi
AUTHOR(S): Maruzzella, Jasper C.; Scrandis, Denis; Scrandis, Joseph B.; Grabon, George
CORPORATE SOURCE: Long Island Univ., Brooklyn, NY
SOURCE: Plant Disease Reporter (**1960**), 44, 789-92
CODEN: PLDRA4; ISSN: 0032-0811
DOCUMENT TYPE: Journal
LANGUAGE: Unavailable

AB When 193 aromatic agents (115 essential oils and 78 org. compds.) were screened in vitro against 3 wood-destroying fungi by the filter paper disk method, 72% of the essential oils and 73% of the org. chemicals produced zones of inhibition against at least 1 of the test organisms. Prominent zones of inhibition were produced by oils of garlic (imported), **origanum** (rectified water white), thyme red, cassia, and styrax; also by hydratropaldehyde, isovaleric acid, caproic acid, cinnamaldehyde, and eugenol. Some of these agents might be of value in the wood preserving industry.

IT **97-53-0**, Eugenol **100-06-1**, Acetophenone, 4'-methoxy- **101-39-3**, Cinnamaldehyde, .alpha.-methyl- **103-95-7**, Hydrocinnamaldehyde, p-isopropyl-.alpha.-methyl- **104-53-0**, Hydrocinnamaldehyde **104-55-2**, Cinnamaldehyde **123-11-5**, p-Anisaldehyde
(as wood **fungicide**)

L22 ANSWER 28 OF 30 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1960:56986 HCAPLUS
DOCUMENT NUMBER: 54:56986
ORIGINAL REFERENCE NO.: 54:11136c-d
TITLE: The action of essential oils on phytopathogenic fungi
AUTHOR(S): Maruzzella, Jasper C.; Balter, Jerry
CORPORATE SOURCE: Long Island Univ., Brooklyn, NY
SOURCE: Plant Disease Reporter (**1959**), 43, 1143-7
CODEN: PLDRA4; ISSN: 0032-0811
DOCUMENT TYPE: Journal
LANGUAGE: Unavailable

AB The in vitro activity of 119 essential oils was tested against 12 phytopathogenic fungi by the filter-paper disk method. Antifungal activity against at least 2 of the 12 test organisms was shown by 100 of the oils. The greatest zones of inhibition were produced by oils of onion, garlic, thyme white, thyme red, **origanum** rectified (water white), **origanum**, bay, lemongrass, sweet birch (northern), and Bois de Rose. All active oils killed the most sensitive organism, Claviceps purpurea, and 58% were active against the least sensitive, Alternaria tenuis.

L22 ANSWER 29 OF 30 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1958:58271 HCAPLUS
DOCUMENT NUMBER: 52:58271
ORIGINAL REFERENCE NO.: 52:10507a-b
TITLE: The in vitro antifungal activity of essential oils
AUTHOR(S): Maruzzella, Jasper C.; Ligouri, Laurence
CORPORATE SOURCE: Long Island Univ., Brooklyn, NY
SOURCE: Journal of the American Pharmaceutical Association (1912-1977) (**1958**), 47, 250-4
CODEN: JPHAA3; ISSN: 0003-0465
DOCUMENT TYPE: Journal
LANGUAGE: Unavailable

AB The in vitro antifungal activity of 92 volatile, 12 terpeneless, and 3 fixed oils was detd. by the filter paper disk method. **Origanum** (red), lemongrass (imported), thyme (red), sweet birch, savory select,

coriander, sassafras, cinnamon, laurel leaves (distd.), and chenopodium had the greatest antifungal activity while among the terpeneless oils, cinnamon, caraway, dill, and anise were the most active. The fixed oils tested were ineffective.

IT **104-46-1**, Anethole
(as **fungicide**)

L22 ANSWER 30 OF 30 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1954:66097 HCAPLUS
DOCUMENT NUMBER: 48:66097
ORIGINAL REFERENCE NO.: 48:11730f-g
TITLE: Antimolding agents for sirups
AUTHOR(S): Lord, Clifton F., Jr.; Husa, William J.
CORPORATE SOURCE: Univ. of Florida, Gainesville
SOURCE: Journal of the American Pharmaceutical Association (1912-1977) (**1954**), 43, 438-40
CODEN: JPHAA3; ISSN: 0003-0465
DOCUMENT TYPE: Journal
LANGUAGE: Unavailable

AB The antimolding effectiveness of more than 200 substances was detd. by using mycophil agar inoculated with microorganisms from deteriorated sirup. Many of the compds., including certain flavoring and perfumery materials, were more active than BzOH (I) and the esters of p-hydroxybenzoic acid. In comparison with I which was effective at 1:1000 concn., cinnamaldehyde was effective at 1:10,000, and quinolinol sulfate at 1:100,000.

IT **104-55-2**, Cinnamaldehyde
(as **fungicide** for sirup)
IT **91-64-5**, Coumarin **97-53-0**, Eugenol **104-46-1**, Anethole **106-23-0**, **Citronellal 141-92-4**, Octanal, 7-hydroxy-3,7-dimethyl-, dimethyl acetal **470-82-6**, **Cineole 5392-40-5**, **Citral**
(as **fungicide** for sirups)
IT **76-22-2**, **Camphor**
(as **fungicides** for sirups)

=> select hit rn l18 1-13
E1 THROUGH E7 ASSIGNED

=> select hit rn l22 1-30
E8 THROUGH E44 ASSIGNED

=> fil reg
FILE 'REGISTRY' ENTERED AT 11:20:17 ON 23 APR 2004
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.
PLEASE SEE "HELP USAGETERMS" FOR DETAILS.
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STRUCTURE FILE UPDATES: 21 APR 2004 HIGHEST RN 676437-01-7
DICTIONARY FILE UPDATES: 21 APR 2004 HIGHEST RN 676437-01-7

TSCA INFORMATION NOW CURRENT THROUGH JANUARY 6, 2004

Please note that search-term pricing does apply when conducting SmartSELECT searches.

Crossover limits have been increased. See HELP CROSSOVER for details.

Experimental and calculated property data are now available. For more

information enter HELP PROP at an arrow prompt in the file or refer
to the file summary sheet on the web at:
http://www.cas.org/ONLINE/DBSS/registryss.html

=>
=>

=> d his l23

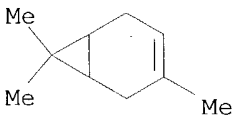
(FILE 'HCAPLUS' ENTERED AT 11:11:59 ON 23 APR 2004)
SELECT HIT RN L18 1-13
SELECT HIT RN L22 1-30

FILE 'REGISTRY' ENTERED AT 11:20:17 ON 23 APR 2004
L23 39 S E1-E44

=>
=>

=> d ide can l23 1-39

L23 ANSWER 1 OF 39 REGISTRY COPYRIGHT 2004 ACS on STN
RN **13466-78-9** REGISTRY
CN Bicyclo[4.1.0]hept-3-ene, 3,7,7-trimethyl- (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN 3-Carene (8CI)
OTHER NAMES:
CN (.+-.)-.DELTA.3-Carene
CN (.+-.)-3-Carene
CN .DELTA.3-Carene
FS 3D CONCORD
DR 116783-27-8
MF C10 H16
CI COM
LC STN Files: AGRICOLA, ANABSTR, BEILSTEIN*, BIOBUSINESS, BIOSIS,
BIOTECHNO, CA, CABA, CAOLD, CAPLUS, CASREACT, CHEMCATS, CHEMINFORMRX,
CHEMLIST, CIN, CSCHEM, CSNB, DDFU, DETHERM*, DRUGU, EMBASE, ENCOMPLIT,
ENCOMPLIT2, ENCOMPPAT, ENCOMPPAT2, IFICDB, IFIPAT, IFIUDB, IPA, MEDLINE,
MRCK*, NAPRALERT, NIOSHTIC, PIRA, PROMT, RTECS*, SPECINFO, SYNTHLINE,
TOXCENTER, ULIDAT, USPAT2, USPATFULL
(*File contains numerically searchable property data)
Other Sources: DSL**, EINECS**, TSCA**
(**Enter CHEMLIST File for up-to-date regulatory information)



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

3670 REFERENCES IN FILE CA (1907 TO DATE)
11 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
3675 REFERENCES IN FILE CAPLUS (1907 TO DATE)
3 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

REFERENCE 1: 140:292185

REFERENCE 2: 140:286510

REFERENCE 3: 140:275693

REFERENCE 4: 140:275691

REFERENCE 5: 140:275688

REFERENCE 6: 140:269828

REFERENCE 7: 140:269690

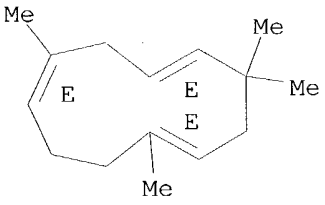
REFERENCE 8: 140:267624

REFERENCE 9: 140:267447

REFERENCE 10: 140:252619

L23 ANSWER 2 OF 39 REGISTRY COPYRIGHT 2004 ACS on STN
RN **6753-98-6** REGISTRY
CN 1,4,8-Cycloundecatriene, 2,6,6,9-tetramethyl-, (1E,4E,8E)- (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN .alpha.-Humulene (6CI, 7CI)
CN 1,4,8-Cycloundecatriene, 2,6,6,9-tetramethyl-, (E,E,E)- (8CI)
OTHER NAMES:
CN (.+-.)-.alpha.-Humulene
CN .alpha.-Caryophyllene
CN Humulene
FS STEREOSEARCH
DR 19132-75-3, 65907-25-7
MF C15 H24
CI COM
LC STN Files: AGRICOLA, ANABSTR, BEILSTEIN*, BIOBUSINESS, BIOSIS, BIOTECHNO, CA, CANCERLIT, CAOLD, CAPLUS, CASREACT, CBNB, CHEMCATS, CHEMINFORMRX, CHEMLIST, CIN, CSCHEM, CSNB, DDFU, DRUGU, EMBASE, GMELIN*, HODOC*, IFICDB, IFIPAT, IFIUDB, IPA, MEDLINE, MRCK*, NAPRALERT, NIOSHTIC, PROMT, RTECS*, SPECINFO, TOXCENTER, USPAT2, USPATFULL
(*File contains numerically searchable property data)
Other Sources: EINECS**, NDSL**, TSCA**
(**Enter CHEMLIST File for up-to-date regulatory information)

Double bond geometry as described by E or Z.



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

4184 REFERENCES IN FILE CA (1907 TO DATE)
12 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
4202 REFERENCES IN FILE CAPLUS (1907 TO DATE)
24 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

REFERENCE 1: 140:292189

REFERENCE 2: 140:284304

REFERENCE 3: 140:284281

REFERENCE 4: 140:284272

REFERENCE 5: 140:275904

REFERENCE 6: 140:275895

REFERENCE 7: 140:275890

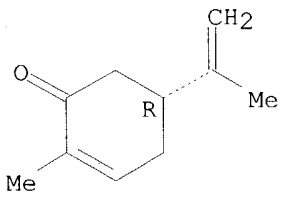
REFERENCE 8: 140:275697

REFERENCE 9: 140:275693

REFERENCE 10: 140:275692

L23 ANSWER 3 OF 39 REGISTRY COPYRIGHT 2004 ACS on STN
RN **6485-40-1** REGISTRY
CN 2-Cyclohexen-1-one, 2-methyl-5-(1-methylethenyl)-, (5R)- (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN 2-Cyclohexen-1-one, 2-methyl-5-(1-methylethenyl)-, (R)-
CN p-Mentha-6,8-dien-2-one, (R)-(-)- (8CI)
OTHER NAMES:
CN (-)-(5R)-Carvone
CN (-)-(R)-Carvone
CN (-)-Carvone
CN (-)-p-Mentha-6,8-dien-2-one
CN (4R)-(-)-Carvone
CN (R)-(-)-Carvone
CN (R)-Carvone
CN (R)-Carvone
CN L-(-)-Carvone
CN l-1-Methyl-4-isopropenyl-6-cyclohexen-2-one
CN l-Carvone
CN L-Carvone
CN R-(-)-Carvone
FS STEREOSEARCH
MF C10 H14 O
CI COM
LC STN Files: AGRICOLA, ANABSTR, BEILSTEIN*, BIOBUSINESS, BIOSIS, CA, CAPLUS, CASREACT, CBNB, CHEMCATS, CHEMINFORMRX, CHEMLIST, CIN, CSCHEM, CSNB, DETHERM*, GMELIN*, HODOC*, IFICDB, IFIPAT, IFIUDB, IPA, NAPRALERT, NIOSHTIC, PROMT, RTECS*, SPECINFO, SYNTHLINE, TOXCENTER, USPAT2, USPATFULL
(*File contains numerically searchable property data)
Other Sources: DSL**, EINECS**, TSCA**
(**Enter CHEMLIST File for up-to-date regulatory information)

Absolute stereochemistry. Rotation (-).



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

1039 REFERENCES IN FILE CA (1907 TO DATE)
4 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
1040 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 140:292244

REFERENCE 2: 140:286704

REFERENCE 3: 140:275895

REFERENCE 4: 140:269690

REFERENCE 5: 140:253314

REFERENCE 6: 140:217818

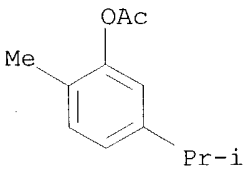
REFERENCE 7: 140:217067

REFERENCE 8: 140:204779

REFERENCE 9: 140:199036

REFERENCE 10: 140:194874

L23 ANSWER 4 OF 39 REGISTRY COPYRIGHT 2004 ACS on STN
RN **6380-28-5** REGISTRY
CN Phenol, 2-methyl-5-(1-methylethyl)-, acetate (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN Carvacrol, acetate (8CI)
OTHER NAMES:
CN Carvacryl acetate
CN NSC 6601
FS 3D CONCORD
MF C12 H16 O2
CI COM
LC STN Files: AGRICOLA, ANABSTR, BEILSTEIN*, BIOBUSINESS, BIOSIS, CA, CAOLD, CAPLUS, CASREACT, CHEMCATS, CHEMLIST, CSCHEM, HODOC*, NAPRALERT, SPECINFO, TOXCENTER, USPATFULL
(*File contains numerically searchable property data)
Other Sources: EINECS**
(**Enter CHEMLIST File for up-to-date regulatory information)



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

108 REFERENCES IN FILE CA (1907 TO DATE)
108 REFERENCES IN FILE CAPLUS (1907 TO DATE)
1 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

REFERENCE 1: 140:267447

REFERENCE 2: 140:248634

REFERENCE 3: 140:222846

REFERENCE 4: 140:187073

REFERENCE 5: 139:385835

REFERENCE 6: 139:348120

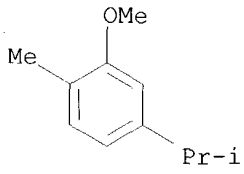
REFERENCE 7: 139:234988

REFERENCE 8: 139:227261

REFERENCE 9: 139:185285

REFERENCE 10: 139:114422

L23 ANSWER 5 OF 39 REGISTRY COPYRIGHT 2004 ACS on STN
RN **6379-73-3** REGISTRY
CN Benzene, 2-methoxy-1-methyl-4-(1-methylethyl)- (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN Anisole, 5-isopropyl-2-methyl- (6CI, 7CI, 8CI)
OTHER NAMES:
CN 2-Methoxy-p-cymol
CN 5-Isopropyl-2-methylanisole
CN Carvacrol methyl ether
CN Carvacryl methyl ether
CN Methyl carvacryl ether
CN Methylcarvacrol
CN NSC 406512
CN O-Methylcarvacrol
FS 3D CONCORD
MF C11 H16 O
LC STN Files: AGRICOLA, ANABSTR, BEILSTEIN*, BIOBUSINESS, BIOSIS, CA, CAOLD, CAPLUS, CASREACT, CHEMCATS, CHEMLIST, CSCHEM, NAPRALERT, TOXCENTER, USPATFULL
(*File contains numerically searchable property data)
Other Sources: DSL**, EINECS**, TSCA**
(**Enter CHEMLIST File for up-to-date regulatory information)



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

240 REFERENCES IN FILE CA (1907 TO DATE)
240 REFERENCES IN FILE CAPLUS (1907 TO DATE)
8 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

REFERENCE 1: 140:275691

REFERENCE 2: 140:250116

REFERENCE 3: 140:248634

REFERENCE 4: 140:222843

REFERENCE 5: 140:187073

REFERENCE 6: 140:160454

REFERENCE 7: 140:117065

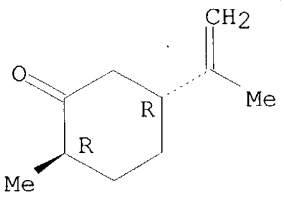
REFERENCE 8: 140:92857

REFERENCE 9: 140:38322

REFERENCE 10: 140:19592

L23 ANSWER 6 OF 39 REGISTRY COPYRIGHT 2004 ACS on STN
RN **5948-04-9** REGISTRY
CN Cyclohexanone, 2-methyl-5-(1-methylethenyl)-, (2R,5R)-rel- (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN Cyclohexanone, 2-methyl-5-(1-methylethenyl)-, trans-
CN p-Menth-8-en-2-one, trans- (8CI)
OTHER NAMES:
CN (.+-.)-Dihydrocarvone
CN Carvone, dihydro-
CN Dihydrocarvone
CN trans-Dihydrocarvone
CN trans-p-Menth-8-en-2-one
FS STEREOSEARCH
DR 4584-09-2
MF C10 H16 O
CI COM
LC STN Files: AGRICOLA, ANABSTR, BEILSTEIN*, BIOBUSINESS, BIOSIS, BIOTECHNO, CA, CABA, CAOLD, CAPLUS, CASREACT, CHEMCATS, CHEMINFORMRX, CHEMLIST, CIN, DDFU, DRUGU, EMBASE, IFICDB, IFIPAT, IFIUDB, IPA, NAPRALERT, SPECINFO, TOXCENTER, USPATFULL
(*File contains numerically searchable property data)

Relative stereochemistry.



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

463 REFERENCES IN FILE CA (1907 TO DATE)
1 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
463 REFERENCES IN FILE CAPLUS (1907 TO DATE)
2 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

REFERENCE 1: 140:275895

REFERENCE 2: 140:269785

REFERENCE 3: 140:267447

REFERENCE 4: 140:240581

REFERENCE 5: 140:194874

REFERENCE 6: 140:133439

REFERENCE 7: 140:125332

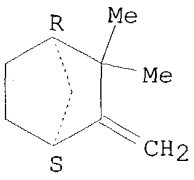
REFERENCE 8: 140:113264

REFERENCE 9: 140:90705

REFERENCE 10: 140:31450

L23 ANSWER 7 OF 39 REGISTRY COPYRIGHT 2004 ACS on STN
RN **5794-03-6** REGISTRY
CN Bicyclo[2.2.1]heptane, 2,2-dimethyl-3-methylene-, (1R,4S)- (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN Bicyclo[2.2.1]heptane, 2,2-dimethyl-3-methylene-, (1R)-
CN Camphene, (1R,4S)-(+)- (8CI)
OTHER NAMES:
CN (+)-Camphene
CN (1R)-Camphene
CN (1R,4S)-2,2-Dimethyl-3-methylenebicyclo[2.2.1]heptane
CN d-Camphene
FS STEREOSEARCH
MF C10 H16
CI COM
LC STN Files: AGRICOLA, ANABSTR, BEILSTEIN*, BIOBUSINESS, BIOSIS, CA, CAPLUS, CASREACT, CHEMCATS, CHEMINFORMRX, CHEMLIST, CSCHEM, GMELIN*, HODOC*, IFICDB, IFIPAT, IFIUDB, NAPRALERT, SPECINFO, TOXCENTER, ULIDAT, USPATFULL
(*File contains numerically searchable property data)
Other Sources: DSL**, EINECS**, TSCA**
(**Enter CHEMLIST File for up-to-date regulatory information)

Absolute stereochemistry. Rotation (+).



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

174 REFERENCES IN FILE CA (1907 TO DATE)
2 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
174 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 140:203877

REFERENCE 2: 140:176684

REFERENCE 3: 139:357574

REFERENCE 4: 139:258140

REFERENCE 5: 139:85148

REFERENCE 6: 139:19561

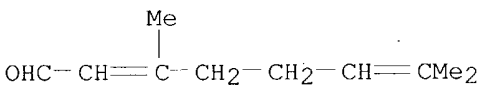
REFERENCE 7: 138:369028

REFERENCE 8: 138:354105

REFERENCE 9: 138:351095

REFERENCE 10: 138:187423

L23 ANSWER 8 OF 39 REGISTRY COPYRIGHT 2004 ACS on STN
RN **5392-40-5** REGISTRY
CN 2,6-Octadienal, 3,7-dimethyl- (8CI, 9CI) (CA INDEX NAME)
OTHER NAMES:
CN 3,7-Dimethyl-2,6-octadien-1-al
CN 3,7-Dimethyl-2,6-octadienal
CN Citral
CN Lemarome N
CN Lemsyn GB
CN NSC 6170
FS 3D CONCORD
DR 433282-33-8, 8022-94-4, 96680-15-8, 37350-34-8, 250599-19-0
MF C10 H16 O
CI COM
LC STN Files: AGRICOLA, ANABSTR, BEILSTEIN*, BIOBUSINESS, BIOSIS, BIOTECHNO, CA, CABA, CANCERLIT, CAOLD, CAPLUS, CASREACT, CBNB, CEN, CHEMCATS, CHEMINFORMRX, CHEMLIST, CIN, CSCHEM, CSNB, DDFU, DETHERM*, DRUGU, EMBASE, HSDB*, IFICDB, IFIPAT, IFIUDB, IPA, MEDLINE, MRCK*, MSDS-OHS, NAPRALERT, NIOSHTIC, PIRA, PROMT, PS, RTECS*, SPECINFO, SYNTHLINE, TOXCENTER, ULIDAT, USPAT2, USPATFULL
(*File contains numerically searchable property data)
Other Sources: DSL**, EINECS**, TSCA**
(**Enter CHEMLIST File for up-to-date regulatory information)



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

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41 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
3327 REFERENCES IN FILE CAPLUS (1907 TO DATE)
7 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

REFERENCE 1: 140:293378

REFERENCE 2: 140:292244

REFERENCE 3: 140:292199

REFERENCE 4: 140:287124

REFERENCE 5: 140:286540

REFERENCE 6: 140:282749

REFERENCE 7: 140:282748

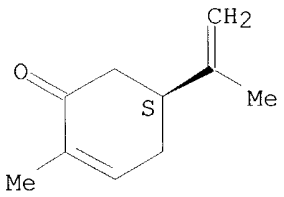
REFERENCE 8: 140:275891

REFERENCE 9: 140:271020

REFERENCE 10: 140:270465

L23 ANSWER 9 OF 39 REGISTRY COPYRIGHT 2004 ACS on STN
RN **2244-16-8** REGISTRY
CN 2-Cyclohexen-1-one, 2-methyl-5-(1-methylethenyl)-, (5S)- (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN 2-Cyclohexen-1-one, 2-methyl-5-(1-methylethenyl)-, (S)-
CN p-Mentha-6,8-dien-2-one, (S)-(+)- (8CI)
OTHER NAMES:
CN (+)-Carvone
CN (S)-(+)-Carvone
CN (S)-Carvone
CN Carvone, (+)-
CN D-(+)-Carvone
CN d-1-Methyl-4-isopropenyl-6-cyclohexen-2-one
CN d-Carvone
CN D-Carvone
CN Talent
FS STEREOSEARCH
DR 53763-73-8
MF C10 H14 O
CI COM
LC STN Files: AGRICOLA, ANABSTR, BEILSTEIN*, BIOBUSINESS, BIOSIS, CA, CABA, CAPLUS, CASREACT, CEN, CHEMCATS, CHEMINFORMRX, CHEMLIST, CIN, CSCHEM, CSNB, DETHERM*, GMELIN*, HODOC*, HSDB*, MSDS-OHS, NAPRALERT, NIOSHTIC, PIRA, PROMT, RTECS*, SPECINFO, TOXCENTER, USPAT2, USPATFULL
(*File contains numerically searchable property data)
Other Sources: DSL**, EINECS**, TSCA**
(**Enter CHEMLIST File for up-to-date regulatory information)

Absolute stereochemistry. Rotation (+).



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

672 REFERENCES IN FILE CA (1907 TO DATE)
1 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
673 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 140:270465

REFERENCE 2: 140:217819

REFERENCE 3: 140:194874

REFERENCE 4: 140:176684

REFERENCE 5: 140:162588

REFERENCE 6: 140:146304

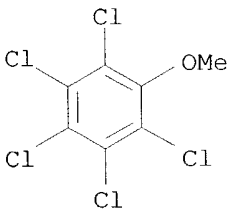
REFERENCE 7: 140:146298

REFERENCE 8: 140:144733

REFERENCE 9: 140:138353

REFERENCE 10: 140:127361

L23 ANSWER 10 OF 39 REGISTRY COPYRIGHT 2004 ACS on STN
RN **1825-21-4** REGISTRY
CN Benzene, pentachloromethoxy- (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN Anisole, 2,3,4,5,6-pentachloro- (6CI, 7CI, 8CI)
OTHER NAMES:
CN 2,3,4,5,6-Pentachloroanisole
CN Methyl pentachlorophenate
CN Methyl pentachlorophenyl ether
CN PCP methyl ether
CN Pentachloroanisole
CN Pentachloromethoxybenzene
CN Pentachlorophenol methyl ether
CN Pentachlorophenyl methyl ether
FS 3D CONCORD
DR 121272-34-2
MF C7 H3 Cl5 O
CI COM
LC STN Files: AGRICOLA, ANABSTR, AQUIRE, BEILSTEIN*, BIOBUSINESS, BIOSIS, BIOTECHNO, CA, CANCERLIT, CAOLD, CAPLUS, CASREACT, CHEMCATS, CHEMLIST, CIN, CSCHEM, EMBASE, HSDB*, MEDLINE, MSDS-OHS, NIOSHTIC, PIRA, RTECS*, SPECINFO, TOXCENTER, ULIDAT, USPATFULL
(*File contains numerically searchable property data)



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

413 REFERENCES IN FILE CA (1907 TO DATE)
1 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
413 REFERENCES IN FILE CAPLUS (1907 TO DATE)
13 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

REFERENCE 1: 140:292040

REFERENCE 2: 140:265760

REFERENCE 3: 140:252474

REFERENCE 4: 140:176649

REFERENCE 5: 140:76139

REFERENCE 6: 140:64171

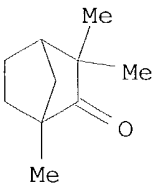
REFERENCE 7: 139:334073

REFERENCE 8: 139:318570

REFERENCE 9: 139:218469

REFERENCE 10: 139:201929

L23 ANSWER 11 OF 39 REGISTRY COPYRIGHT 2004 ACS on STN
RN **1195-79-5** REGISTRY
CN Bicyclo[2.2.1]heptan-2-one, 1,3,3-trimethyl- (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN 2-Norbornanone, 1,3,3-trimethyl- (6CI, 8CI)
OTHER NAMES:
CN (.+-.)-Fenchone
CN 1,3,3-Trimethyl-2-norbornanone
CN 1,3,3-Trimethylbicyclo[2.2.1]heptan-2-one
CN 1,3,3-Trimethylnorcamphor
CN dl-Fenchone
CN Fenchone
CN NSC 122687
CN NSC 8896
FS 3D CONCORD
DR 126-21-6, 18492-37-0
MF C10 H16 O
CI COM
LC STN Files: AGRICOLA, ANABSTR, BEILSTEIN*, BIOBUSINESS, BIOSIS, BIOTECHNO, CA, CAOLD, CAPLUS, CASREACT, CHEMCATS, CHEMINFORMRX, CHEMLIST, CSCHEM, DDFU, DETHERM*, DRUGU, EMBASE, GMELIN*, HODOC*, IFICDB, IFIPAT, IFIUDB, IPA, MEDLINE, NAPRALERT, NIOSHTIC, RTECS*, SPECINFO, TOXCENTER, USPATFULL
(*File contains numerically searchable property data)
Other Sources: DSL**, EINECS**, TSCA**
(**Enter CHEMLIST File for up-to-date regulatory information)



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

1151 REFERENCES IN FILE CA (1907 TO DATE)
6 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
1156 REFERENCES IN FILE CAPLUS (1907 TO DATE)
36 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

REFERENCE 1: 140:216365

REFERENCE 2: 140:212437

REFERENCE 3: 140:204765

REFERENCE 4: 140:204763

REFERENCE 5: 140:204762

REFERENCE 6: 140:192520

REFERENCE 7: 140:180404

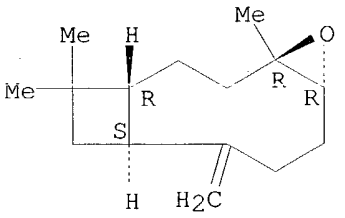
REFERENCE 8: 140:164045

REFERENCE 9: 140:162438

REFERENCE 10: 140:142619

L23 ANSWER 12 OF 39 REGISTRY COPYRIGHT 2004 ACS on STN
RN **1139-30-6** REGISTRY
CN 5-Oxatricyclo[8.2.0.04,6]dodecane, 4,12,12-trimethyl-9-methylene-, (1R,4R,6R,10S)- (8CI, 9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN 5-Oxatricyclo[8.2.0.04,6]dodecane, 4,12,12-trimethyl-9-methylene-, [1R-(1R*,4R*,6R*,10S*)]-
CN Caryophyllene oxide (6CI)
CN Caryophyllene, epoxide (7CI)
OTHER NAMES:
CN (-)-.beta.-Caryophyllene epoxide
CN (-)-.beta.-Caryophyllene oxide
CN (-)-Caryophyllene oxide
CN (-)-Epoxydihydrocaryophyllene
CN .beta.-Caryophyllene epoxide
CN .beta.-Caryophyllene oxide
CN 4.beta.,5.alpha.-Epoxycaryophyllene
CN 6,7-Epoxy-3(15)-caryophyllene
CN Caryophyllene 4.beta.,5.alpha.-epoxide
CN Caryophyllene 4.beta.,5.alpha.-oxide
CN trans-Caryophyllene oxide
FS STEREOSEARCH
DR 11023-55-5, 105120-46-5, 32095-03-7, 52209-95-7
MF C15 H24 O
LC STN Files: AGRICOLA, ANABSTR, BEILSTEIN*, BIOBUSINESS, BIOSIS, BIOTECHNO, CA, CAOLD, CAPLUS, CASREACT, CHEMCATS, CHEMINFORMRX, CHEMLIST, CSCHEM, DDFU, DRUGU, EMBASE, HSDB*, IPA, NAPRALERT, NIOSHTIC, PIRA, RTECS*, SPECINFO, TOXCENTER, USPATFULL
(*File contains numerically searchable property data)
Other Sources: DSL**, EINECS**, TSCA**
(**Enter CHEMLIST File for up-to-date regulatory information)

Absolute stereochemistry.



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

2720 REFERENCES IN FILE CA (1907 TO DATE)
4 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
2744 REFERENCES IN FILE CAPLUS (1907 TO DATE)
3 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

REFERENCE 1: 140:292197

REFERENCE 2: 140:292190

REFERENCE 3: 140:292187

REFERENCE 4: 140:292185

REFERENCE 5: 140:284304

REFERENCE 6: 140:284272

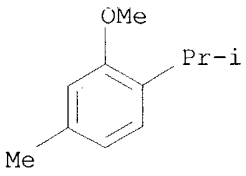
REFERENCE 7: 140:275890

REFERENCE 8: 140:275889

REFERENCE 9: 140:275697

REFERENCE 10: 140:275696

L23 ANSWER 13 OF 39 REGISTRY COPYRIGHT 2004 ACS on STN
RN **1076-56-8** REGISTRY
CN Benzene, 2-methoxy-4-methyl-1-(1-methylethyl)- (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN Anisole, 2-isopropyl-5-methyl- (6CI, 7CI, 8CI)
OTHER NAMES:
CN 1-Isopropyl-2-methoxy-4-methylbenzene
CN 2-Isopropyl-5-methylanisole
CN 3-Methoxy-p-cymene
CN 4-Isopropyl-3-methoxytoluene
CN Methyl thymol ether
CN Methyl thymyl ether
CN NSC 404221
CN O-Methylthymol
CN Thymol methyl ether
CN Thymyl methyl ether
FS 3D CONCORD
MF C11 H16 O
LC STN Files: AGRICOLA, ANABSTR, BEILSTEIN*, BIOBUSINESS, BIOSIS, CA, CAOLD, CAPLUS, CASREACT, CHEMINFORMRX, CHEMLIST, DETHERM*, NAPRALERT, RTECS*, SPECINFO, TOXCENTER, USPATFULL
(*File contains numerically searchable property data)
Other Sources: DSL**, EINECS**, TSCA**
(**Enter CHEMLIST File for up-to-date regulatory information)



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

477 REFERENCES IN FILE CA (1907 TO DATE)
1 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
479 REFERENCES IN FILE CAPLUS (1907 TO DATE)
15 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

REFERENCE 1: 140:275691

REFERENCE 2: 140:267447

REFERENCE 3: 140:234660

REFERENCE 4: 140:204760

REFERENCE 5: 140:204759

REFERENCE 6: 140:178284

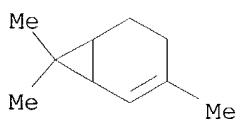
REFERENCE 7: 140:117065

REFERENCE 8: 140:116916

REFERENCE 9: 140:108111

REFERENCE 10: 140:104490

L23 ANSWER 14 OF 39 REGISTRY COPYRIGHT 2004 ACS on STN
RN **554-61-0** REGISTRY
CN Bicyclo[4.1.0]hept-2-ene, 3,7,7-trimethyl- (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN 2-Carene (7CI, 8CI)
OTHER NAMES:
CN (.+-.)-2-Carene
CN .DELTA.2-Carene
CN .DELTA.4-Carene
FS 3D CONCORD
DR 53702-19-5
MF C10 H16
LC STN Files: AGRICOLA, ANABSTR, BEILSTEIN*, BIOBUSINESS, BIOSIS, CA, CAOLD, CAPLUS, CASREACT, CHEMINFORMRX, CHEMLIST, CSNB, IFICDB, IFIPAT, IFIUDB, NAPRALERT, SPECINFO, TOXCENTER, ULIDAT, USPATFULL
(*File contains numerically searchable property data)



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

374 REFERENCES IN FILE CA (1907 TO DATE)
2 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
375 REFERENCES IN FILE CAPLUS (1907 TO DATE)
11 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

REFERENCE 1: 140:252619

REFERENCE 2: 140:250120

REFERENCE 3: 140:222056

REFERENCE 4: 140:204759

REFERENCE 5: 140:181474

REFERENCE 6: 140:180404

REFERENCE 7: 140:178380

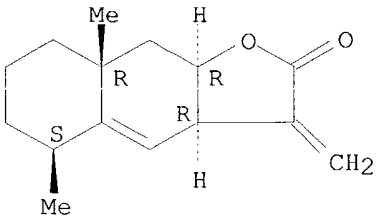
REFERENCE 8: 140:176684

REFERENCE 9: 140:169217

REFERENCE 10: 140:142100

L23 ANSWER 15 OF 39 REGISTRY COPYRIGHT 2004 ACS on STN
RN **546-43-0** REGISTRY
CN Naphtho[2,3-b]furan-2(3H)-one, 3a,5,6,7,8,8a,9,9a-octahydro-5,8a-dimethyl-3-methylene-, (3aR,5S,8aR,9aR)- (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN 4.alpha.H-Eudesma-5,11(13)-dien-12-oic acid, 8.beta.-hydroxy-, .gamma.-lactone (8CI)
CN Alantolactone (6CI)
CN Helenin (7CI)
CN Naphtho[2,3-b]furan-2(3H)-one, 3a,5,6,7,8,8a,9,9a-octahydro-5,8a-dimethyl-3-methylene-, [3aR-(3a.alpha.,5.beta.,8a.beta.,9a.alpha.)]-
OTHER NAMES:
CN (+)-Alantolactone
CN Alant camphor
CN Elecampane camphor
CN Eupatal
CN Inula camphor
CN NSC 93131
FS STEREOSEARCH
MF C15 H20 O2
LC STN Files: AGRICOLA, ANABSTR, BEILSTEIN*, BIOBUSINESS, BIOSIS, BIOTECHNO, CA, CAOLD, CAPLUS, CASREACT, CHEMCATS, CHEMLIST, CSCHEM, DDFU, DETHERM*, DRUGU, EMBASE, HODOC*, IPA, MEDLINE, MRCK*, NAPRALERT, NIOSHTIC, RTECS*, TOXCENTER, USPAT2, USPATFULL
(*File contains numerically searchable property data)
Other Sources: EINECS**
(**Enter CHEMLIST File for up-to-date regulatory information)

Absolute stereochemistry.



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

206 REFERENCES IN FILE CA (1907 TO DATE)
4 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
206 REFERENCES IN FILE CAPLUS (1907 TO DATE)
15 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

REFERENCE 1: 139:332331

REFERENCE 2: 139:239847

REFERENCE 3: 139:202444

REFERENCE 4: 139:78728

REFERENCE 5: 138:265132

REFERENCE 6: 138:86548

REFERENCE 7: 138:55630

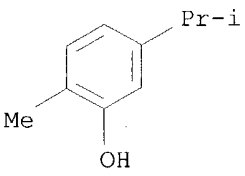
REFERENCE 8: 138:2267

REFERENCE 9: 136:262668

REFERENCE 10: 136:252227

L23 ANSWER 16 OF 39 REGISTRY COPYRIGHT 2004 ACS on STN
RN **499-75-2** REGISTRY
CN Phenol, 2-methyl-5-(1-methylethyl)- (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN Carvacrol (8CI)
OTHER NAMES:
CN 2-Hydroxy-1-methyl-4-(1-methylethyl)benzene
CN 2-Hydroxy-p-cymene
CN 2-Methyl-5-(1-methylethyl)phenol
CN 2-Methyl-5-isopropylphenol
CN 3-Isopropyl-6-methylphenol
CN 5-Isopropyl-2-methylphenol
CN 5-Isopropyl-o-cresol
CN 6-Methyl-3-isopropylphenol
CN Antioxine
CN Isopropyl o-cresol
CN Isothymol
CN NSC 6188
CN p-Cymen-2-ol
FS 3D CONCORD
MF C10 H14 O
CI COM
LC STN Files: AGRICOLA, ANABSTR, AQUIRE, BEILSTEIN*, BIOBUSINESS, BIOSIS, BIOTECHNO, CA, CANCERLIT, CAOLD, CAPLUS, CASREACT, CHEMCATS,

CHEMINFORMRX, CHEMLIST, CIN, CSCHEM, DDFU, DETHERM*, DIOGENES, DRUGU, EMBASE, GMELIN*, HODOC*, HSDB*, IFICDB, IFIPAT, IFIUDB, IPA, MEDLINE, MRCK*, MSDS-OHS, NAPRALERT, NIOSHTIC, PROMT, RTECS*, SPECINFO, TOXCENTER, USPAT2, USPATFULL
(*File contains numerically searchable property data)
Other Sources: DSL**, EINECS**, TSCA**
(**Enter CHEMLIST File for up-to-date regulatory information)



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

2632 REFERENCES IN FILE CA (1907 TO DATE)
18 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
2640 REFERENCES IN FILE CAPLUS (1907 TO DATE)
20 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

REFERENCE 1: 140:292191

REFERENCE 2: 140:292187

REFERENCE 3: 140:275891

REFERENCE 4: 140:275698

REFERENCE 5: 140:275690

REFERENCE 6: 140:267447

REFERENCE 7: 140:250015

REFERENCE 8: 140:248634

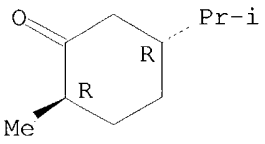
REFERENCE 9: 140:240660

REFERENCE 10: 140:240581

L23 ANSWER 17 OF 39 REGISTRY COPYRIGHT 2004 ACS on STN
RN **499-70-7** REGISTRY
CN Cyclohexanone, 2-methyl-5-(1-methylethyl)-, (2R,5R)-rel- (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN Cyclohexanone, 2-methyl-5-(1-methylethyl)-, trans-
OTHER NAMES:
CN Carvomenthone
CN Tetrahydrocarvone
CN trans-5-Isopropyl-2-methylcyclohexanone
CN trans-p-Menthan-2-one
FS STEREOSEARCH
DR 17712-01-5, 3901-92-6, 80876-46-6, 116562-19-7
MF C10 H18 O
LC STN Files: ANABSTR, BEILSTEIN*, BIOBUSINESS, BIOSIS, CA, CAOLD, CAPLUS, CASREACT, CHEMINFORMRX, CHEMLIST, HODOC*, NAPRALERT, SPECINFO, TOXCENTER, USPATFULL
(*File contains numerically searchable property data)

Other Sources: DSL**, EINECS**
(**Enter CHEMLIST File for up-to-date regulatory information)

Relative stereochemistry.



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

115 REFERENCES IN FILE CA (1907 TO DATE)
115 REFERENCES IN FILE CAPLUS (1907 TO DATE)
1 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

REFERENCE 1: 139:324947

REFERENCE 2: 137:278746

REFERENCE 3: 137:190040

REFERENCE 4: 137:185681

REFERENCE 5: 136:374498

REFERENCE 6: 135:231535

REFERENCE 7: 135:141945

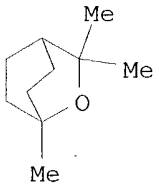
REFERENCE 8: 135:107463

REFERENCE 9: 134:63162

REFERENCE 10: 133:362435

L23 ANSWER 18 OF 39 REGISTRY COPYRIGHT 2004 ACS on STN
RN **470-82-6** REGISTRY
CN 2-Oxabicyclo[2.2.2]octane, 1,3,3-trimethyl- (6CI, 9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN p-Menthane, 1,8-epoxy- (8CI)
OTHER NAMES:
CN 1,3,3-Trimethyl-2-oxabicyclo[2.2.2]octane
CN 1,8-Cineol
CN 1,8-Cineole
CN 1,8-Epoxy-p-menthane
CN 2-Oxa-1,3,3-trimethylbicyclo[2.2.2]octane
CN Cajeputol
CN Cineol
CN Cineole
CN Eucalyptol
CN Eucalyptole
CN Eucapur
CN NSC 6171
CN p-Cineole
CN Terpan
FS 3D CONCORD
DR 8024-52-0, 8024-53-1, 10458-11-4
MF C10 H18 O
CI COM

LC STN Files: ADISNEWS, AGRICOLA, ANABSTR, AQUIRE, BEILSTEIN*, BIOBUSINESS, BIOSIS, BIOTECHNO, CA, CABA, CANCERLIT, CAOLD, CAPLUS, CASREACT, CBNB, CEN, CHEMCATS, CHEMINFORMRX, CHEMLIST, CIN, CSCHEM, CSNB, DDFU, DETHERM*, DIOGENES, DRUGU, EMBASE, GMELIN*, HODOC*, HSDB*, IFICDB, IFIPAT, IFIUDB, IPA, MEDLINE, MRCK*, NAPRALERT, NIOSHTIC, PDLCOM*, PROMT, PS, RTECS*, SPECINFO, TOXCENTER, ULIDAT, USAN, USPAT2, USPATFULL, VETU
(*File contains numerically searchable property data)
Other Sources: DSL**, EINECS**, TSCA**
(**Enter CHEMLIST File for up-to-date regulatory information)



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

7064 REFERENCES IN FILE CA (1907 TO DATE)
38 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
7088 REFERENCES IN FILE CAPLUS (1907 TO DATE)
8 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

REFERENCE 1: 140:292732

REFERENCE 2: 140:292641

REFERENCE 3: 140:292196

REFERENCE 4: 140:292195

REFERENCE 5: 140:292194

REFERENCE 6: 140:292190

REFERENCE 7: 140:292186

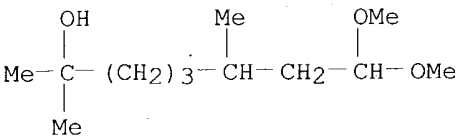
REFERENCE 8: 140:291272

REFERENCE 9: 140:286209

REFERENCE 10: 140:282772

L23 ANSWER 19 OF 39 REGISTRY COPYRIGHT 2004 ACS on STN
RN **141-92-4** REGISTRY
CN 2-Octanol, 8,8-dimethoxy-2,6-dimethyl- (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN Octanal, 7-hydroxy-3,7-dimethyl-, dimethyl acetal (6CI, 7CI, 8CI)
OTHER NAMES:
CN 1,1-Dimethoxy-3,7-dimethyloctan-7-ol
CN 7-Hydroxy-3,7-dimethyloctanal, dimethyl acetal
CN 8,8-Dimethoxy-2,6-dimethyl-2-octanol
CN Hydroxycitronellal dimethyl acetal
CN Laurine dimethyl acetal
CN NSC 76412
FS 3D CONCORD
MF C12 H26 O3

LC STN Files: BEILSTEIN*, BIOSIS, CA, CAOLD, CAPLUS, CASREACT, CHEMCATS, CHEMLIST, CIN, CSCHEM, IFICDB, IFIPAT, IFIUDB, RTECS*, SPECINFO, TOXCENTER, USPATFULL
(*File contains numerically searchable property data)
Other Sources: DSL**, EINECS**, TSCA**
(**Enter CHEMLIST File for up-to-date regulatory information)



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

26 REFERENCES IN FILE CA (1907 TO DATE)
26 REFERENCES IN FILE CAPLUS (1907 TO DATE)
4 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

REFERENCE 1: 138:326295

REFERENCE 2: 138:242863

REFERENCE 3: 137:357932

REFERENCE 4: 136:147821

REFERENCE 5: 133:250376

REFERENCE 6: 131:156180

REFERENCE 7: 130:342748

REFERENCE 8: 130:172746

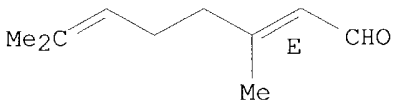
REFERENCE 9: 127:225086

REFERENCE 10: 127:23502

L23 ANSWER 20 OF 39 REGISTRY COPYRIGHT 2004 ACS on STN
RN **141-27-5** REGISTRY
CN 2,6-Octadienal, 3,7-dimethyl-, (2E)- (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN 2,6-Octadienal, 3,7-dimethyl-, (E)- (8CI)
OTHER NAMES:
CN (2E)-3,7-Dimethyl-2,6-octadien-1-al
CN (2E)-3,7-Dimethyl-2,6-octadienal
CN (E)-3,7-Dimethyl-2,6-octadienal
CN (E)-Citral
CN (E)-Geranial
CN (E)-Neral
CN .alpha.-Citral
CN .beta.-Geranial
CN Citral a
CN Geranaldehyde
CN Geranial
CN trans-3,7-Dimethyl-2,6-octadienal
CN trans-Citral
FS STEREOSEARCH
MF C10 H16 O

CI COM
LC STN Files: AGRICOLA, ANABSTR, BEILSTEIN*, BIOBUSINESS, BIOSIS, BIOTECHNO, CA, CABA, CAOLD, CAPLUS, CASREACT, CEN, CHEMINFORMRX, CHEMLIST, CIN, DETHERM*, EMBASE, HODOC*, IFICDB, IFIPAT, IFIUDB, IPA, MRCK*, MSDS-OHS, NAPRALERT, NIOSHTIC, PROMT, RTECS*, SPECINFO, TOXCENTER, USPAT2, USPATFULL
(*File contains numerically searchable property data)
Other Sources: DSL**, EINECS**, TSCA**
(**Enter CHEMLIST File for up-to-date regulatory information)

Double bond geometry as shown.



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

2304 REFERENCES IN FILE CA (1907 TO DATE)
8 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
2314 REFERENCES IN FILE CAPLUS (1907 TO DATE)
3 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

REFERENCE 1: 140:292185

REFERENCE 2: 140:286510

REFERENCE 3: 140:275895

REFERENCE 4: 140:275698

REFERENCE 5: 140:275695

REFERENCE 6: 140:275686

REFERENCE 7: 140:271017

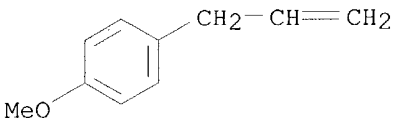
REFERENCE 8: 140:253112

REFERENCE 9: 140:249085

REFERENCE 10: 140:234709

L23 ANSWER 21 OF 39 REGISTRY COPYRIGHT 2004 ACS on STN
RN **140-67-0** REGISTRY
CN Benzene, 1-methoxy-4-(2-propenyl)- (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN Anisole, p-allyl- (8CI)
CN Estragole (6CI)
CN Ether, p-allylphenyl methyl (7CI)
OTHER NAMES:
CN 1-Allyl-4-methoxybenzene
CN 1-Methoxy-4-(2-propenyl)benzene
CN 3-(4-Methoxyphenyl)-1-propene
CN 3-(p-Methoxyphenyl)-1-propene
CN 3-(p-Methoxyphenyl)propene
CN 4-Allylanisole
CN 4-Allylmethoxybenzene
CN 4-Methoxyallylbenzene
CN Chavicol methyl ether

CN Chavicol, methyl-
CN Chavicol, O-methyl-
CN Esdragol
CN Esdragole
CN Esdragon
CN Estragol
CN Isoanethole
CN Methyl chavicol
CN NSC 404113
CN p-Allylanisole
CN p-Allylphenyl methyl ether
CN p-Methoxyallylbenzene
FS 3D CONCORD
DR 1407-27-8, 77525-18-9
MF C10 H12 O
CI COM
LC STN Files: AGRICOLA, ANABSTR, BEILSTEIN*, BIOBUSINESS, BIOSIS, BIOTECHNO, CA, CANCERLIT, CAOLD, CAPLUS, CASREACT, CBNB, CHEMCATS, CHEMINFORMRX, CHEMLIST, CIN, CSCHEM, CSNB, DDFU, DETHERM*, DRUGU, EMBASE, HODOC*, HSDB*, IFICDB, IFIPAT, IFIUDB, IPA, MEDLINE, MRCK*, NAPRALERT, NIOSHTIC, PIRA, PROMT, RTECS*, SPECINFO, SYNTHLINE, TOXCENTER, USPAT2, USPATFULL
(*File contains numerically searchable property data)
Other Sources: DSL**, EINECS**, TSCA**
(**Enter CHEMLIST File for up-to-date regulatory information)



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

1598 REFERENCES IN FILE CA (1907 TO DATE)
11 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
1603 REFERENCES IN FILE CAPLUS (1907 TO DATE)
33 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

REFERENCE 1: 140:292364

REFERENCE 2: 140:292199

REFERENCE 3: 140:284281

REFERENCE 4: 140:282602

REFERENCE 5: 140:270549

REFERENCE 6: 140:265938

REFERENCE 7: 140:256023

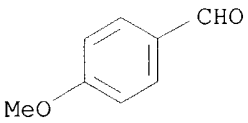
REFERENCE 8: 140:253293

REFERENCE 9: 140:250015

REFERENCE 10: 140:249085

L23 ANSWER 22 OF 39 REGISTRY COPYRIGHT 2004 ACS on STN
RN **123-11-5** REGISTRY

CN Benzaldehyde, 4-methoxy- (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN p-Anisaldehyde (8CI)
OTHER NAMES:
CN 4-Anisaldehyde
CN 4-Methoxybenzaldehyde
CN Anisaldehyde
CN Anisic aldehyde
CN Aubepine
CN Crategine
CN NSC 5590
CN Obepin
CN p-Anisic aldehyde
CN p-Formylanisole
CN p-Methoxybenzaldehyde
FS 3D CONCORD
DR 68894-36-0, 26249-15-0
MF C8 H8 O2
CI COM
LC STN Files: ANABSTR, BEILSTEIN*, CA, CAPLUS, CHEMCATS, CHEMLIST, HODOC*, IFICDB, IFIPAT, IFIUDB, IPA, NIOSHTIC, SPECINFO, SYNTHLINE, TOXCENTER, USPAT2, USPATFULL
(*File contains numerically searchable property data)
Other Sources: EINECS**, NDSL**, TSCA**
(**Enter CHEMLIST File for up-to-date regulatory information)



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

14137 REFERENCES IN FILE CA (1907 TO DATE)
50 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
14193 REFERENCES IN FILE CAPLUS (1907 TO DATE)
8 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

REFERENCE 1: 140:288811

REFERENCE 2: 140:287320

REFERENCE 3: 140:287318

REFERENCE 4: 140:287312

REFERENCE 5: 140:287213

REFERENCE 6: 140:287178

REFERENCE 7: 140:287156

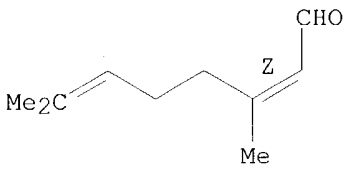
REFERENCE 8: 140:287127

REFERENCE 9: 140:286857

REFERENCE 10: 140:286856

L23 ANSWER 23 OF 39 REGISTRY COPYRIGHT 2004 ACS on STN
RN **106-26-3** REGISTRY
CN 2,6-Octadienal, 3,7-dimethyl-, (2Z)- (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN 2,6-Octadienal, 3,7-dimethyl-, (Z)- (8CI)
OTHER NAMES:
CN (2Z)-3,7-Dimethyl-2,6-octadien-1-al
CN (2Z)-3,7-Dimethyl-2,6-octadienal
CN (Z)-3,7-Dimethyl-2,6-octadienal
CN (Z)-Citral
CN (Z)-Neral
CN .beta.-Citral
CN cis-3,7-Dimethyl-2,6-octadienal
CN cis-Citral
CN Citral b
CN Neral
FS STEREOSEARCH
MF C10 H16 O
CI COM
LC STN Files: AGRICOLA, ANABSTR, BEILSTEIN*, BIOBUSINESS, BIOSIS, BIOTECHNO, CA, CABA, CAOLD, CAPLUS, CASREACT, CHEMINFORMRX, CHEMLIST, DETHERM*, EMBASE, HODOC*, IFICDB, IFIPAT, IFIUDB, IPA, MRCK*, MSDS-OHS, NAPRALERT, PROMT, SPECINFO, TOXCENTER, USPAT2, USPATFULL
(*File contains numerically searchable property data)
Other Sources: DSL**, EINECS**, TSCA**
(**Enter CHEMLIST File for up-to-date regulatory information)

Double bond geometry as shown.



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

1916 REFERENCES IN FILE CA (1907 TO DATE)
8 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
1923 REFERENCES IN FILE CAPLUS (1907 TO DATE)
4 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

REFERENCE 1: 140:286510

REFERENCE 2: 140:275895

REFERENCE 3: 140:275695

REFERENCE 4: 140:269690

REFERENCE 5: 140:249085

REFERENCE 6: 140:234709

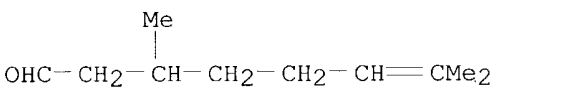
REFERENCE 7: 140:234684

REFERENCE 8: 140:234661

REFERENCE 9: 140:234660

REFERENCE 10: 140:234611

L23 ANSWER 24 OF 39 REGISTRY COPYRIGHT 2004 ACS on STN
RN **106-23-0** REGISTRY
CN 6-Octenal, 3,7-dimethyl- (8CI, 9CI) (CA INDEX NAME)
OTHER NAMES:
CN (.+-.)-Citronellal
CN .beta.-Citronellal
CN 2,3-Dihydrocitral
CN 3,7-Dimethyl-6-octenal
CN 3,7-Dimethyloct-6-en-1-al
CN Citronellal
CN dl-Citronellal
CN NSC 46106
CN Rhodinal
FS 3D CONCORD
DR 26489-02-1
MF C10 H18 O
CI COM
LC STN Files: AGRICOLA, ANABSTR, AQUIRE, BEILSTEIN*, BIOBUSINESS, BIOSIS, BIOTECHNO, CA, CAOLD, CAPLUS, CASREACT, CBNB, CEN, CHEMCATS, CHEMINFORMRX, CHEMLIST, CIN, CSCHEM, CSNB, DDFU, DETHERM*, DRUGU, EMBASE, HODOC*, HSDB*, IFICDB, IFIPAT, IFIUDB, IPA, MEDLINE, MRCK*, NAPRALERT, NIOSHTIC, PROMT, RTECS*, SPECINFO, TOXCENTER, USPAT2, USPATFULL
(*File contains numerically searchable property data)
Other Sources: DSL**, EINECS**, TSCA**
(**Enter CHEMLIST File for up-to-date regulatory information)



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

2682 REFERENCES IN FILE CA (1907 TO DATE)
22 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
2692 REFERENCES IN FILE CAPLUS (1907 TO DATE)
14 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

REFERENCE 1: 140:292643

REFERENCE 2: 140:292241

REFERENCE 3: 140:275904

REFERENCE 4: 140:275695

REFERENCE 5: 140:269690

REFERENCE 6: 140:240582

REFERENCE 7: 140:237571

REFERENCE 8: 140:235877

REFERENCE 9: 140:234684

REFERENCE 10: 140:234611

L23 ANSWER 25 OF 39 REGISTRY COPYRIGHT 2004 ACS on STN
RN **104-55-2** REGISTRY
CN 2-Propenal, 3-phenyl- (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN Cinnamaldehyde (8CI)
OTHER NAMES:
CN .beta.-Phenylacrolein
CN 3-Phenyl-2-propen-1-al
CN 3-Phenyl-2-propenal
CN 3-Phenyl-2-propenaldehyde
CN 3-Phenyl-2-propene-1-al
CN 3-Phenylacrolein
CN 3-Phenylacrylaldehyde
CN 3-Phenylpropenal
CN Abion CA
CN Benzylideneacetaldehyde
CN Cassia aldehyde
CN Cinnamal
CN Cinnamic aldehyde
CN Cinnamite
CN Cinnamyl aldehyde
CN NSC 16935
CN NSC 40346
CN Phenylacrolein
CN Zimtaldehyde
FS 3D CONCORD
MF C9 H8 O
CI COM
LC STN Files: AGRICOLA, ANABSTR, BEILSTEIN*, BIOBUSINESS, BIOSIS, CA, CAPLUS, CASREACT, CEN, CHEMCATS, CHEMINFORMRX, CHEMLIST, CIN, CSCHEM, DETHERM*, GMELIN*, IFICDB, IFIPAT, IFIUDB, MEDLINE, MSDS-OHS, NAPRALERT, PROMT, RTECS*, SPECINFO, TOXCENTER, USPAT2, USPATFULL
(*File contains numerically searchable property data)
Other Sources: DSL**, EINECS**, TSCA**
(**Enter CHEMLIST File for up-to-date regulatory information)

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PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

7359 REFERENCES IN FILE CA (1907 TO DATE)
91 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
7381 REFERENCES IN FILE CAPLUS (1907 TO DATE)
5 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

REFERENCE 1: 140:292199

REFERENCE 2: 140:287828

REFERENCE 3: 140:287094

REFERENCE 4: 140:286851

REFERENCE 5: 140:286849

REFERENCE 6: 140:286330

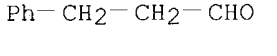
REFERENCE 7: 140:282603

REFERENCE 8: 140:282602

REFERENCE 9: 140:280184

REFERENCE 10: 140:270359

L23 ANSWER 26 OF 39 REGISTRY COPYRIGHT 2004 ACS on STN
RN **104-53-0** REGISTRY
CN Benzenepropanal (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN Hydrocinnamaldehyde (6CI, 8CI)
OTHER NAMES:
CN .beta.-Phenylpropionaldehyde
CN 3-Phenyl-1-propanal
CN 3-Phenylpropanal
CN 3-Phenylpropanaldehyde
CN 3-Phenylpropionaldehyde
CN 3-Phenylpropyl aldehyde
CN Benzylacetaldehyde
CN Dihydrocinnamaldehyde
CN Hydrocinnamic aldehyde
CN NSC 9271
FS 3D CONCORD
MF C9 H10 O
CI COM
LC STN Files: AGRICOLA, ANABSTR, BEILSTEIN*, BIOBUSINESS, BIOSIS, CA, CAOLD, CAPLUS, CASREACT, CEN, CHEMCATS, CHEMINFORMRX, CHEMLIST, CIN, CSCHEM, DETHERM*, GMELIN*, HODOC*, IFICDB, IFIPAT, IFIUDB, MEDLINE, MSDS-OHS, NAPRALERT, PROMT, RTECS*, SPECINFO, TOXCENTER, USPAT2, USPATFULL
(*File contains numerically searchable property data)
Other Sources: DSL**, EINECS**, TSCA**
(**Enter CHEMLIST File for up-to-date regulatory information)



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

3550 REFERENCES IN FILE CA (1907 TO DATE)
19 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
3560 REFERENCES IN FILE CAPLUS (1907 TO DATE)
24 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

REFERENCE 1: 140:287710

REFERENCE 2: 140:287281

REFERENCE 3: 140:287094

REFERENCE 4: 140:287091

REFERENCE 5: 140:286857

REFERENCE 6: 140:286851

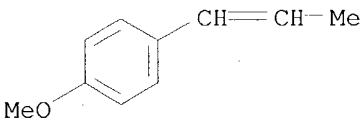
REFERENCE 7: 140:270542

REFERENCE 8: 140:253561

REFERENCE 9: 140:253422

REFERENCE 10: 140:253401

L23 ANSWER 27 OF 39 REGISTRY COPYRIGHT 2004 ACS on STN
RN **104-46-1** REGISTRY
CN Benzene, 1-methoxy-4-(1-propenyl)- (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN Anisole, p-propenyl- (8CI)
OTHER NAMES:
CN 1-Methoxy-4-(1-propenyl)benzene
CN 1-Methoxy-4-propenylbenzene
CN 1-Propene, 1-(4-methoxyphenyl)-
CN 4-(1-Propenyl)anisole
CN 4-Methoxy-1-propenylbenzene
CN 4-Methoxypropenylbenzene
CN 4-Propenylanisole
CN Anethol
CN Anethole
CN Anise camphor
CN Isoestragole
CN Nauli gum
CN NSC 4018
CN Oil of aniseed
CN p-1-Propenylanisole
CN p-Anethole
CN p-Methoxy-.beta.-methylstyrene
CN p-Propenylanisole
CN p-Propenylphenyl methyl ether
FS 3D CONCORD
DR 12002-40-3, 8022-08-0
MF C10 H12 O
CI COM
LC STN Files: ADISNEWS, AGRICOLA, ANABSTR, AQUIRE, BEILSTEIN*, BIOBUSINESS, BIOSIS, BIOTECHNO, CA, CANCERLIT, CAOLD, CAPLUS, CASREACT, CBNB, CHEMCATS, CHEMINFORMRX, CHEMLIST, CIN, CSCHEM, CSNB, DDFU, DETHERM*, DIOGENES, DIPPR*, DRUGU, EMBASE, GMELIN*, HODOC*, HSDB*, IFICDB, IFIPAT, IFIUDB, IPA, MEDLINE, MRCK*, MSDS-OHS, NAPRALERT, NIOSHTIC, PDLCOM*, PROMT, PS, RTECS*, SPECINFO, TOXCENTER, USAN, USPAT2, USPATFULL
(*File contains numerically searchable property data)
Other Sources: DSL**, EINECS**, TSCA**
(**Enter CHEMLIST File for up-to-date regulatory information)



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

1620 REFERENCES IN FILE CA (1907 TO DATE)
13 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
1621 REFERENCES IN FILE CAPLUS (1907 TO DATE)
8 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

REFERENCE 1: 140:282787

REFERENCE 2: 140:266145

REFERENCE 3: 140:265890

REFERENCE 4: 140:263933

REFERENCE 5: 140:241137

REFERENCE 6: 140:240660

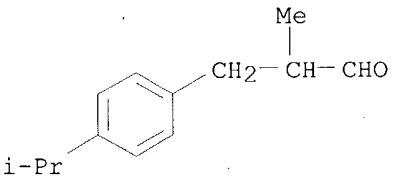
REFERENCE 7: 140:237571

REFERENCE 8: 140:222931

REFERENCE 9: 140:210720

REFERENCE 10: 140:194580

L23 ANSWER 28 OF 39 REGISTRY COPYRIGHT 2004 ACS on STN
RN **103-95-7** REGISTRY
CN Benzenepropanal, .alpha.-methyl-4-(1-methylethyl)- (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN Hydrocinnamaldehyde, p-isopropyl-.alpha.-methyl- (6CI, 7CI, 8CI)
OTHER NAMES:
CN .alpha.-Methyl-p-isopropylhydrocinnamaldehyde
CN 2-Methyl-3-(p-isopropylphenyl)propionaldehyde
CN 3-(4-Isopropylphenyl)-2-methylpropanal
CN 3-(p-Isopropylphenyl)-2-methylpropionaldehyde
CN 3-p-Cumenyl-2-methylpropionaldehyde
CN 4-Isopropyl-.alpha.-methylhydrocinnamic aldehyde
CN Cyclamal
CN Cyclamen aldehyde
CN Cymal
CN p-Isopropyl-.alpha.-methylhydrocinnamaldehyde
FS 3D CONCORD
DR 80949-77-5
MF C13 H18 O
CI COM
LC STN Files: BEILSTEIN*, BIOSIS, CA, CAOLD, CAPLUS, CASREACT, CHEMCATS, CHEMLIST, CIN, CSCHEM, CSNB, DDFU, DETHERM*, DRUGU, EMBASE, HODOC*, IFICDB, IFIPAT, IFIUDB, PROMT, RTECS*, SPECINFO, TOXCENTER, USPAT2, USPATFULL
(*File contains numerically searchable property data)
Other Sources: DSL**, EINECS**, TSCA**
(**Enter CHEMLIST File for up-to-date regulatory information)



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

300 REFERENCES IN FILE CA (1907 TO DATE)
3 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
300 REFERENCES IN FILE CAPLUS (1907 TO DATE)
34 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

REFERENCE 1: 140:282602

REFERENCE 2: 140:240660

REFERENCE 3: 140:222931

REFERENCE 4: 140:222864

REFERENCE 5: 140:204779

REFERENCE 6: 140:133439

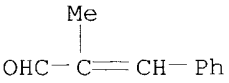
REFERENCE 7: 140:111370

REFERENCE 8: 140:77362

REFERENCE 9: 140:72209

REFERENCE 10: 140:8495

L23 ANSWER 29 OF 39 REGISTRY COPYRIGHT 2004 ACS on STN
RN **101-39-3** REGISTRY
CN 2-Propenal, 2-methyl-3-phenyl- (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN Cinnamaldehyde, .alpha.-methyl- (6CI, 7CI, 8CI)
OTHER NAMES:
CN .alpha.-Methylcinnamaldehyde
CN .alpha.-Methylcinnamic aldehyde
CN 2-Methyl-3-phenyl-2-propenal
CN 2-Methyl-3-phenylacrolein
CN 2-Methyl-3-phenylacrylaldehyde
CN NSC 22283
CN NSC 49286
FS 3D CONCORD
MF C10 H10 O
CI COM
LC STN Files: AGRICOLA, BEILSTEIN*, BIOBUSINESS, BIOSIS, CA, CAOLD, CAPLUS, CASREACT, CHEMCATS, CHEMINFORMRX, CHEMLIST, CSCHEM, CSNB, DETHERM*, GMELIN*, HODOC*, IFICDB, IFIPAT, IFIUDB, NAPRALERT, RTECS*, SPECINFO, SYNTHLINE, TOXCENTER, ULIDAT, USPATFULL
(*File contains numerically searchable property data)
Other Sources: DSL**, EINECS**, TSCA**
(**Enter CHEMLIST File for up-to-date regulatory information)



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

305 REFERENCES IN FILE CA (1907 TO DATE)
305 REFERENCES IN FILE CAPLUS (1907 TO DATE)
15 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

REFERENCE 1: 140:282603

REFERENCE 2: 140:282602

REFERENCE 3: 140:253477

REFERENCE 4: 140:163515

REFERENCE 5: 140:133439

REFERENCE 6: 140:110830

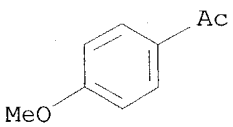
REFERENCE 7: 140:93483

REFERENCE 8: 140:93461

REFERENCE 9: 140:72209

REFERENCE 10: 140:59655

L23 ANSWER 30 OF 39 REGISTRY COPYRIGHT 2004 ACS on STN
RN **100-06-1** REGISTRY
CN Ethanone, 1-(4-methoxyphenyl)- (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN Acetophenone, 4'-methoxy- (8CI)
OTHER NAMES:
CN 1-(4-Methoxyphenyl)ethanone
CN 1-Acetyl-4-methoxybenzene
CN 4'-Methoxyacetophenone
CN 4-Acetylanisole
CN 4-Methoxyphenyl methyl ketone
CN Acetoanisole
CN Linarodin
CN Methyl 4-methoxyphenyl ketone
CN Methyl p-methoxyphenyl ketone
CN Novatone
CN NSC 209523
CN NSC 5601
CN p-Acetylanisole
CN p-Anisyl methyl ketone
CN p-Methoxy(acetyl)benzene
CN p-Methoxyacetophenone
CN p-Methoxyphenyl methyl ketone
CN para-Methoxyacetophenone
CN Vananote
FS 3D CONCORD
MF C9 H10 O2
CI COM
LC STN Files: AGRICOLA, ANABSTR, AQUIRE, BEILSTEIN*, BIOBUSINESS, BIOSIS, CA, CAOLD, CAPLUS, CASREACT, CHEMCATS, CHEMINFORMRX, CHEMLIST, CSCHEM, CSNB, DETHERM*, GMELIN*, HODOC*, IFICDB, IFIPAT, IFIUDB, MEDLINE, NAPRALERT, NIOSHTIC, PROMT, RTECS*, SPECINFO, SYNTHLINE, TOXCENTER, USPAT2, USPATFULL
(*File contains numerically searchable property data)
Other Sources: DSL**, EINECS**, TSCA**
(**Enter CHEMLIST File for up-to-date regulatory information)



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

3208 REFERENCES IN FILE CA (1907 TO DATE)

20 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
3222 REFERENCES IN FILE CAPLUS (1907 TO DATE)
5 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

REFERENCE 1: 140:288041

REFERENCE 2: 140:286857

REFERENCE 3: 140:282602

REFERENCE 4: 140:275891

REFERENCE 5: 140:271562

REFERENCE 6: 140:270910

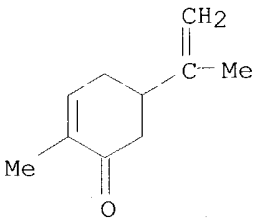
REFERENCE 7: 140:270683

REFERENCE 8: 140:253559

REFERENCE 9: 140:253506

REFERENCE 10: 140:253304

L23 ANSWER 31 OF 39 REGISTRY COPYRIGHT 2004 ACS on STN
RN **99-49-0** REGISTRY
CN 2-Cyclohexen-1-one, 2-methyl-5-(1-methylethenyl)- (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN p-Mentha-6,8-dien-2-one (8CI)
OTHER NAMES:
CN (.+-.)-Carvone
CN 2-Methyl-5-(1-methylethenyl)-2-cyclohexen-1-one
CN 2-Methyl-5-isopropenyl-2-cyclohexenone
CN 5-Isopropyl-2-methyl-2-cyclohexen-1-one
CN Carvone
CN DL-Carvone
CN Karvon
CN NSC 6275
CN p-Mentha-1(6),8-dien-2-one
FS 3D CONCORD
DR 22327-39-5
MF C10 H14 O
CI COM
LC STN Files: AGRICOLA, ANABSTR, BEILSTEIN*, BIOBUSINESS, BIOSIS, BIOTECHNO, CA, CABA, CANCERLIT, CAOLD, CAPLUS, CASREACT, CBNB, CEN, CHEMCATS, CHEMINFORMRX, CHEMLIST, CIN, CSCHEM, CSNB, DDFU, DETHERM*, DRUGU, EMBASE, GMELIN*, HODOC*, HSDB*, IFICDB, IFIPAT, IFIUDB, IPA, MEDLINE, MRCK*, NAPRALERT, NIOSHTIC, PROMT, RTECS*, SPECINFO, TOXCENTER, USPAT2, USPATFULL
(*File contains numerically searchable property data)
Other Sources: DSL**, EINECS**, TSCA**
(**Enter CHEMLIST File for up-to-date regulatory information)



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

2873 REFERENCES IN FILE CA (1907 TO DATE)
15 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
2885 REFERENCES IN FILE CAPLUS (1907 TO DATE)
8 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

REFERENCE 1: 140:292187

REFERENCE 2: 140:275895

REFERENCE 3: 140:275891

REFERENCE 4: 140:275699

REFERENCE 5: 140:275698

REFERENCE 6: 140:275694

REFERENCE 7: 140:275690

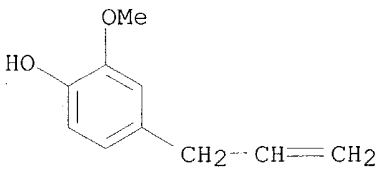
REFERENCE 8: 140:269853

REFERENCE 9: 140:269828

REFERENCE 10: 140:269785

L23 ANSWER 32 OF 39 REGISTRY COPYRIGHT 2004 ACS on STN
RN **97-53-0** REGISTRY
CN Phenol, 2-methoxy-4-(2-propenyl)- (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN Phenol, 4-allyl-2-methoxy- (8CI)
OTHER NAMES:
CN 1-Allyl-4-hydroxy-3-methoxybenzene
CN 2-Hydroxy-5-allylanisole
CN 2-Methoxy-1-hydroxy-4-allylbenzene
CN 2-Methoxy-4-(2'-propenyl)phenol
CN 2-Methoxy-4-(2-propenyl)phenol
CN 2-Methoxy-4-allylphenol
CN 3-(3-Methoxy-4-hydroxyphenyl)propene
CN 3-(4-Hydroxy-3-methoxyphenyl)-1-propene
CN 4-Allyl-1-hydroxy-2-methoxybenzene
CN 4-Allyl-2-methoxyphenol
CN 4-Allylguaiacol
CN 4-Hydroxy-3-methoxyallylbenzene
CN Allylguaiacol
CN Caryophyllic acid
CN Eugenic acid
CN Eugenol
CN NSC 209525
CN NSC 8895

CN p-Allylguaiacol
CN p-Eugenol
FS 3D CONCORD
MF C10 H12 O2
CI COM
LC STN Files: ADISNEWS, AGRICOLA, ANABSTR, AQUIRE, BEILSTEIN*, BIOBUSINESS, BIOSIS, BIOTECHNO, CA, CABA, CANCERLIT, CAOLD, CAPLUS, CASREACT, CBNB, CEN, CHEMCATS, CHEMINFORMRX, CHEMLIST, CIN, CSCHEM, CSNB, DDFU, DETHERM*, DIOGENES, DRUGU, EMBASE, GMELIN*, HODOC*, HSDB*, IFICDB, IFIPAT, IFIUDB, IPA, MEDLINE, MRCK*, MSDS-OHS, NAPRALERT, NIOSHTIC, PDLCOM*, PIRA, PROMT, RTECS*, SPECINFO, TOXCENTER, ULIDAT, USAN, USPAT2, USPATFULL, VTB
(*File contains numerically searchable property data)
Other Sources: DSL**, EINECS**, TSCA**
(**Enter CHEMLIST File for up-to-date regulatory information)



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

5904 REFERENCES IN FILE CA (1907 TO DATE)
145 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
5920 REFERENCES IN FILE CAPLUS (1907 TO DATE)
19 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

REFERENCE 1: 140:296534

REFERENCE 2: 140:292241

REFERENCE 3: 140:292199

REFERENCE 4: 140:286336

REFERENCE 5: 140:284037

REFERENCE 6: 140:282602

REFERENCE 7: 140:275897

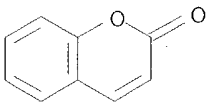
REFERENCE 8: 140:275779

REFERENCE 9: 140:275696

REFERENCE 10: 140:275689

L23 ANSWER 33 OF 39 REGISTRY COPYRIGHT 2004 ACS on STN
RN **91-64-5** REGISTRY
CN 2H-1-Benzopyran-2-one (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN Coumarin (8CI)
OTHER NAMES:
CN 1,2-Benzopyrone
CN 2-Propenoic acid, 3-(2-hydroxyphenyl)-, .delta.-lactone
CN 5,6-Benzo-2-pyrone
CN Benzo-.alpha.-pyrone

CN cis-o-Coumarinic acid lactone
CN Coumarinic anhydride
CN NSC 8774
CN o-Hydroxycinnamic acid lactone
CN Rattex
CN Tonka bean camphor
FS 3D CONCORD
MF C9 H6 O2
CI COM
LC STN Files: ADISNEWS, AGRICOLA, ANABSTR, AQUIRE, BEILSTEIN*, BIOBUSINESS, BIOSIS, BIOTECHNO, CA, CABA, CANCERLIT, CAOLD, CAPLUS, CASREACT, CBNB, CEN, CHEMCATS, CHEMINFORMRX, CHEMLIST, CIN, CSCHEM, CSNB, DDFU, DETHERM*, DIOGENES, DRUGU, EMBASE, GMELIN*, HODOC*, HSDB*, IFICDB, IFIPAT, IFIUDB, IPA, MEDLINE, MRCK*, MSDS-OHS, NAPRALERT, NIOSHTIC, PDLCOM*, PIRA, PROMT, RTECS*, SPECINFO, TOXCENTER, ULIDAT, USAN, USPAT2, USPATFULL
(*File contains numerically searchable property data)
Other Sources: DSL**, EINECS**, TSCA**
(**Enter CHEMLIST File for up-to-date regulatory information)



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

7012 REFERENCES IN FILE CA (1907 TO DATE)
1514 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
7023 REFERENCES IN FILE CAPLUS (1907 TO DATE)
10 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

REFERENCE 1: 140:292499

REFERENCE 2: 140:292222

REFERENCE 3: 140:292199

REFERENCE 4: 140:289230

REFERENCE 5: 140:289120

REFERENCE 6: 140:287238

REFERENCE 7: 140:284269

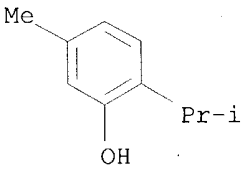
REFERENCE 8: 140:282610

REFERENCE 9: 140:280741

REFERENCE 10: 140:275891

L23 ANSWER 34 OF 39 REGISTRY COPYRIGHT 2004 ACS on STN
RN **89-83-8** REGISTRY
CN Phenol, 5-methyl-2-(1-methylethyl)- (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN Thymol (8CI)
OTHER NAMES:

CN 1-Methyl-3-hydroxy-4-isopropylbenzene
CN 2-Hydroxy-1-isopropyl-4-methylbenzene
CN 2-Isopropyl-5-methylphenol
CN 3-Hydroxy-p-cymene
CN 3-Methyl-6-isopropylphenol
CN 5-Methyl-2-(1-methylethyl)phenol
CN 5-Methyl-2-isopropyl-1-phenol
CN 5-Methyl-2-isopropylphenol
CN 6-Isopropyl-3-methylphenol
CN 6-Isopropyl-m-cresol
CN m-Thymol
CN NSC 11215
CN NSC 47821
CN NSC 49142
CN p-Cymen-3-ol
CN Thyme camphor
CN Thymol Chrystals
FS 3D CONCORD
MF C10 H14 O
CI COM
LC STN Files: ADISNEWS, AGRICOLA, ANABSTR, AQUIRE, BEILSTEIN*, BIOBUSINESS, BIOSIS, BIOTECHNO, CA, CABA, CANCERLIT, CAOLD, CAPLUS, CASREACT, CBNB, CHEMCATS, CHEMINFORMRX, CHEMLIST, CIN, CSCHEM, DDFU, DETHERM*, DIOGENES, DRUGU, EMBASE, GMELIN*, HODOC*, HSDB*, IFICDB, IFIPAT, IFIUDB, IPA, MEDLINE, MRCK*, MSDS-OHS, NAPRALERT, NIOSHTIC, PDLCOM*, PIRA, PROMT, PS, RTECS*, SPECINFO, TOXCENTER, ULIDAT, USAN, USPAT2, USPATFULL, VETU
(*File contains numerically searchable property data)
Other Sources: DSL**, EINECS**, TSCA**
(**Enter CHEMLIST File for up-to-date regulatory information)



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

5556 REFERENCES IN FILE CA (1907 TO DATE)
60 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
5565 REFERENCES IN FILE CAPLUS (1907 TO DATE)
7 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

REFERENCE 1: 140:292732

REFERENCE 2: 140:292650

REFERENCE 3: 140:292241

REFERENCE 4: 140:292191

REFERENCE 5: 140:284281

REFERENCE 6: 140:281061

REFERENCE 7: 140:275897

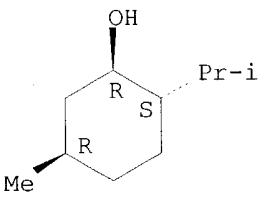
REFERENCE 8: 140:275690

REFERENCE 9: 140:275688

REFERENCE 10: 140:269701

L23 ANSWER 35 OF 39 REGISTRY COPYRIGHT 2004 ACS on STN
RN **89-78-1** REGISTRY
CN Cyclohexanol, 5-methyl-2-(1-methylethyl)-, (1R,2S,5R)-rel- (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN Cyclohexanol, 5-methyl-2-(1-methylethyl)-, (1.alpha.,2.beta.,5.alpha.)-
CN Menthol, cis-1,3,trans-1,4- (8CI)
OTHER NAMES:
CN (.+-.)-Menthol
CN (1R,2S,5R)-rel-5-Methyl-2-(1-methylethyl)cyclohexanol
CN dl-Menthol
CN Fisherman's Friend Lozenges
CN Hexahydrothymol
CN Menthacamphor
CN Menthol
CN Menthomenthol
CN NSC 2603
CN Peppermint camphor
CN rac-Menthol
CN Racementhol
CN Therapeutic Mineral Ice
CN Thymomenthol
FS STEREOSEARCH
DR 15356-70-4
MF C10 H20 O
CI COM
LC STN Files: ADISNEWS, AGRICOLA, ANABSTR, BEILSTEIN*, BIOBUSINESS, BIOSIS, BIOTECHNO, CA, CAOLD, CAPLUS, CASREACT, CBNB, CEN, CHEMCATS, CHEMINFORMRX, CHEMLIST, CIN, CSCHEM, CSNB, DIOGENES, EMBASE, GMELIN*, HODOC*, HSDB*, IFICDB, IFIPAT, IFIUDB, MEDLINE, MRCK*, MSDS-OHS, NIOSHTIC, PDLCOM*, PIRA, PROMT, PS, RTECS*, SPECINFO, TOXCENTER, USAN, USPAT2, USPATFULL
(*File contains numerically searchable property data)
Other Sources: DSL**, EINECS**, TSCA**
(**Enter CHEMLIST File for up-to-date regulatory information)

Relative stereochemistry.



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

2450 REFERENCES IN FILE CA (1907 TO DATE)
37 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
2456 REFERENCES IN FILE CAPLUS (1907 TO DATE)
1 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

REFERENCE 1: 140:292744

REFERENCE 2: 140:292650

REFERENCE 3: 140:292208

REFERENCE 4: 140:292186

REFERENCE 5: 140:286255

REFERENCE 6: 140:276282

REFERENCE 7: 140:276205

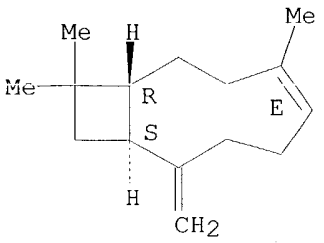
REFERENCE 8: 140:276158

REFERENCE 9: 140:270573

REFERENCE 10: 140:259084

L23 ANSWER 36 OF 39 REGISTRY COPYRIGHT 2004 ACS on STN
RN **87-44-5** REGISTRY
CN Bicyclo[7.2.0]undec-4-ene, 4,11,11-trimethyl-8-methylene-, (1R,4E,9S)-
(9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN Bicyclo[7.2.0]undec-4-ene, 4,11,11-trimethyl-8-methylene-,
(E)-(1R,9S)-(-)- (8CI)
CN Bicyclo[7.2.0]undec-4-ene, 4,11,11-trimethyl-8-methylene-,
[1R-(1R*,4E,9S*)]-
OTHER NAMES:
CN (-)-(E)-Caryophyllene
CN (-)-.beta.-Caryophyllene
CN (-)-Caryophyllene
CN (-)-E-Caryophyllene
CN (-)-trans-Caryophyllene
CN (E)-Caryophyllene
CN .beta.-Caryophyllen
CN .beta.-Caryophyllene
CN .beta.-Caryophyllene, (-)
CN Caryophyllene
CN l-Caryophyllene
CN NSC 11906
CN trans-Caryophyllene
FS STEREOSEARCH
DR 8007-38-3, 1407-53-0
MF C15 H24
CI COM
LC STN Files: AGRICOLA, ANABSTR, BEILSTEIN*, BIOBUSINESS, BIOSIS,
BIOTECHNO, CA, CAOLD, CAPLUS, CASREACT, CHEMCATS, CHEMINFORMRX,
CHEMLIST, CSCHEM, DDFU, DETHERM*, DRUGU, EMBASE, HODOC*, IFICDB, IFIPAT,
IFIUDB, IPA, MEDLINE, MRCK*, NAPRALERT, NIOSHTIC, PIRA, PROMT, RTECS*,
SPECINFO, TOXCENTER, USPAT2, USPATFULL
(*File contains numerically searchable property data)
Other Sources: DSL**, EINECS**, TSCA**
(**Enter CHEMLIST File for up-to-date regulatory information)

Absolute stereochemistry.
Double bond geometry as described by E or Z.



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

7175 REFERENCES IN FILE CA (1907 TO DATE)
31 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
7208 REFERENCES IN FILE CAPLUS (1907 TO DATE)
9 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

REFERENCE 1: 140:292194

REFERENCE 2: 140:292191

REFERENCE 3: 140:292190

REFERENCE 4: 140:292189

REFERENCE 5: 140:292186

REFERENCE 6: 140:292185

REFERENCE 7: 140:284362

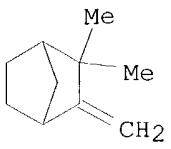
REFERENCE 8: 140:284304

REFERENCE 9: 140:284282

REFERENCE 10: 140:284281

L23 ANSWER 37 OF 39 REGISTRY COPYRIGHT 2004 ACS on STN
RN **79-92-5** REGISTRY
CN Bicyclo[2.2.1]heptane, 2,2-dimethyl-3-methylene- (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN Camphene (8CI)
OTHER NAMES:
CN (.+-.)-Camphene
CN 2,2-Dimethyl-3-methylenebicyclo[2.2.1]heptane
CN 2,2-Dimethyl-3-methylenenorbornane
CN 3,3-Dimethyl-2-methylenenorbornane
CN 3,3-Dimethyl-2-methylenenorcamphane
CN dl-Camphene
CN DL-Camphene
CN NSC 4165
FS 3D CONCORD
DR 565-00-4
MF C10 H16
CI COM
LC STN Files: AGRICOLA, ANABSTR, AQUIRE, BEILSTEIN*, BIOBUSINESS, BIOSIS, BIOTECHNO, CA, CABA, CAOLD, CAPLUS, CASREACT, CBNB, CHEMCATS, CHEMINFORMRX, CHEMLIST, CIN, CSCHEM, DDFU, DETHERM*, DIPPR*, DRUGU, EMBASE, ENCOMPLIT, ENCOMPLIT2, ENCOMPPAT, ENCOMPPAT2, GMELIN*, HODOC*, HSDB*, IFICDB, IFIPAT, IFIUDB, IPA, MEDLINE, MRCK*, MSDS-OHS, NAPRALERT,

NIOSHTIC, PDLCOM*, PIRA, PROMT, PS, RTECS*, SPECINFO, TOXCENTER, ULIDAT, USPAT2, USPATFULL, VTB
(*File contains numerically searchable property data)
Other Sources: DSL**, EINECS**, TSCA**
(**Enter CHEMLIST File for up-to-date regulatory information)



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

7136 REFERENCES IN FILE CA (1907 TO DATE)
71 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
7157 REFERENCES IN FILE CAPLUS (1907 TO DATE)
2 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

REFERENCE 1: 140:292194

REFERENCE 2: 140:292186

REFERENCE 3: 140:288630

REFERENCE 4: 140:275904

REFERENCE 5: 140:275895

REFERENCE 6: 140:275891

REFERENCE 7: 140:275699

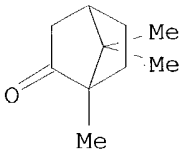
REFERENCE 8: 140:275698

REFERENCE 9: 140:275694

REFERENCE 10: 140:275693

L23 ANSWER 38 OF 39 REGISTRY. COPYRIGHT 2004 ACS on STN
RN **76-22-2** REGISTRY
CN Bicyclo[2.2.1]heptan-2-one, 1,7,7-trimethyl- (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN Camphor (8CI)
OTHER NAMES:
CN (.+-.)-Camphor
CN 1,7,7-Trimethylbicyclo[2.2.1]-2-heptanone
CN 1,7,7-Trimethylnorcamphor
CN 2-Bornanone
CN 2-Camphanone
CN Alphanon
CN Borneo camphor
CN DL-Camphor
CN dl-Camphor
CN Root bark oil
CN Spirit of camphor
FS 3D CONCORD
DR 8013-55-6, 8022-77-3, 21368-68-3, 48113-22-0

MF C10 H16 O
CI COM
LC STN Files: ADISINSIGHT, ADISNEWS, AGRICOLA, ANABSTR, AQUIRE, BEILSTEIN*, BIOBUSINESS, BIOSIS, BIOTECHNO, CA, CABA, CANCERLIT, CAOLD, CAPLUS, CASREACT, CBNB, CEN, CHEMCATS, CHEMINFORMRX, CHEMLIST, CHEMSAFE, CIN, CSCHEM, DETHERM*, DIOGENES, DIPPR*, EMBASE, GMELIN*, HODOC*, HSDB*, IFICDB, IFIPAT, IFIUDB, IPA, MEDLINE, MRCK*, MSDS-OHS, NAPRALERT, NIOSHTIC, PDLCOM*, PHAR, PIRA, PROMT, RTECS*, SPECINFO, TOXCENTER, TULSA, ULIDAT, USAN, USPAT2, USPATFULL
(*File contains numerically searchable property data)
Other Sources: DSL**, EINECS**, TSCA**
(**Enter CHEMLIST File for up-to-date regulatory information)



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

8964 REFERENCES IN FILE CA (1907 TO DATE)
194 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
8987 REFERENCES IN FILE CAPLUS (1907 TO DATE)
4 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

REFERENCE 1: 140:292763

REFERENCE 2: 140:292744

REFERENCE 3: 140:292650

REFERENCE 4: 140:292222

REFERENCE 5: 140:292194

REFERENCE 6: 140:292186

REFERENCE 7: 140:286856

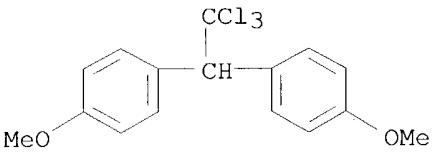
REFERENCE 8: 140:286851

REFERENCE 9: 140:283320

REFERENCE 10: 140:282761

L23 ANSWER 39 OF 39 REGISTRY COPYRIGHT 2004 ACS on STN
RN **72-43-5** REGISTRY
CN Benzene, 1,1'-(2,2,2-trichloroethylidene)bis[4-methoxy- (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN Ethane, 1,1,1-trichloro-2,2-bis(p-methoxyphenyl)- (8CI)
OTHER NAMES:
CN 1,1,1-Trichloro-2,2-bis(4-methoxyphenyl)ethane
CN 1,1,1-Trichloro-2,2-bis(p-methoxyphenyl)ethane
CN 1,1,1-Trichloro-2,2-di(4-methoxyphenyl)ethane
CN 1,1-Bis(p-methoxyphenyl)-2,2,2-trichloroethane
CN 2,2,2-Trichloro-1,1-bis(4-methoxyphenyl)ethane
CN 2,2-Bis(4-methoxyphenyl)-1,1,1-trichloroethane

CN 2,2-Bis(p-methoxyphenyl)-1,1,1-trichloroethane
CN 2,2-Di-p-anisyl-1,1,1-trichloroethane
CN 4,4'-(2,2,2-Trichloroethylidene)dianisole
CN Di(p-methoxyphenyl)(trichloromethyl)methane
CN Dimethoxy-DDT
CN DMDT
CN Marlate
CN Mesox K
CN Methoxcide
CN Methoxy-DDT
CN Methoxychlor
CN Metox
CN Metox plynny
CN Mezox K
CN NSC 8945
CN p,p'-Dimethoxydiphenyltrichloroethane
CN p,p'-DMDT
CN p,p'-Methoxychlor
FS 3D CONCORD
MF C16 H15 Cl3 O2
CI COM
LC STN Files: ADISNEWS, AGRICOLA, ANABSTR, AQUIRE, BEILSTEIN*, BIOBUSINESS, BIOSIS, BIOTECHNO, CA, CABA, CANCERLIT, CAOLD, CAPLUS, CASREACT, CBNB, CEN, CHEMCATS, CHEMLIST, CHEMSAFE, CIN, CSCHEM, CSNB, DETHERM*, EMBASE, HODOC*, HSDB*, IFICDB, IFIPAT, IFIUDB, MEDLINE, MRCK*, MSDS-OHS, NIOSHTIC, PDLCOM*, PIRA, PROMT, RTECS*, SPECINFO, TOXCENTER, ULIDAT, USPAT2, USPATFULL
(*File contains numerically searchable property data)
Other Sources: DSL**, EINECS**
(**Enter CHEMLIST File for up-to-date regulatory information)



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

3179 REFERENCES IN FILE CA (1907 TO DATE)
17 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
3181 REFERENCES IN FILE CAPLUS (1907 TO DATE)
28 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

REFERENCE 1: 140:282635

REFERENCE 2: 140:282634

REFERENCE 3: 140:282590

REFERENCE 4: 140:282562

REFERENCE 5: 140:280742

REFERENCE 6: 140:265890

REFERENCE 7: 140:240432

REFERENCE 8: 140:230692

REFERENCE 9: 140:222663

REFERENCE 10: 140:216341

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=> fil hcaplus
FILE 'HCAPLUS' ENTERED AT 11:26:30 ON 23 APR 2004
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.
PLEASE SEE "HELP USAGETERMS" FOR DETAILS.
COPYRIGHT (C) 2004 AMERICAN CHEMICAL SOCIETY (ACS)
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FILE COVERS 1907 - 23 Apr 2004  VOL 140 ISS 18
FILE LAST UPDATED: 22 Apr 2004  (20040422/ED)

 This file contains CAS Registry Numbers for easy and accurate
 substance identification.


=>
=>

=> d stat que
L13          6790 SEA FILE=REGISTRY ABB=ON  PLU=ON  CADIDENE OR CAMPHENE OR
                  CAMPHOR OR CARENE OR CARYOPHYLLENE OR CARVONE OR CARVACROL OR
                  CARYOPHYLLENE OR CINNAMIC(W)ALDEHYDE OR CITRAL OR CITRONELLAL
                  OR CINEOL OR ANISOLE OR CARYOPHYLLENE OR CINEOLE OR CYMEME
L14        231798 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L13 OR CADIDENE OR CAMPHENE
                  OR CAMPHOR OR CARENE OR CARYOPHYLLENE OR CARVONE OR CARVACROL
                  OR CARYOPHYLLENE OR CINNAMIC(W)ALDEHYDE OR CITRAL OR CITRONELLA
                  L OR CINEOL OR ANISOLE OR CARYOPHYLLENE OR CINEOLE OR CYMEME
L15          7857 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L14 AND (REPEL? INSECTICIDE?
                  OR APHICIDE? OR ACARICIDE? OR ANTIBACTERIAL(W) AGENT OR
                  FUNGICIDE  OR NEMATOCIDE? OR PESTICIDE? OR TERMITICIDE?)
L16          1553 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L14 (L)(REPEL? INSECTICIDE?
                  OR APHICIDE? OR ACARICIDE? OR ANTIBACTERIAL(W) AGENT OR
                  FUNGICIDE  OR NEMATOCIDE? OR PESTICIDE? OR TERMITICIDE?)
L17           750 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L14(L)(LABIATAE OR  UMBELLIFER
                  A OR THYMBRA OR  SATUREJA OR ORIGANUM OR  CORYDOTHYMUS OR
                  PINPINELLA OR FOENICULUM OR SPICATA OR MAJORANA OR CAPITATUS
                  OR VULGARE OR SOLYMICUM OR SPYLEUM OR BILGERI OR MINUTIFLORUM
                  OR ACCATUM OR SRIACUM OR ONITES OR ANISUM)
L18            13 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L17 AND L16
L19          1261 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L14 AND (LABIATAE OR
                  UMBELLIFERA OR THYMBRA OR  SATUREJA OR ORIGANUM OR  CORYDOTHYMU
                  S OR PINPINELLA OR FOENICULUM OR SPICATA OR MAJORANA OR
                  CAPITATUS OR VULGARE OR SOLYMICUM OR SPYLEUM OR BILGERI OR
                  MINUTIFLORUM OR ACCATUM OR SRIACUM OR ONITES OR ANISUM)
L20           103 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L15 AND L19
L21            90 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L20 NOT L18
L22            30 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L21 AND PD=<OCTOBER 10, 1998
L24          9850 SEA FILE=HCAPLUS ABB=ON  PLU=ON  ?LABIAT? OR ?UMBELLIFER? OR
                  LAURUS OR MOBILIS
L25           608 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L24 AND ESSENTIAL OIL
L26            42 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L25 AND (REPEL? INSECTICIDE?
                  OR APHICIDE? OR ACARICIDE? OR ANTIBACTERIAL(W) AGENT OR
                  FUNGICIDE  OR NEMATOCIDE? OR PESTICIDE? OR TERMITICIDE?)
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L27 34 SEA FILE=HCAPLUS ABB=ON PLU=ON L26 NOT (L18 OR L22)

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=> d ibib abs hitrn l27 1-34

L27 ANSWER 1 OF 34 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 2003:769628 HCAPLUS
DOCUMENT NUMBER: 140:212437
TITLE: Chemical composition and antifungal activity of **essential oils** of seven Moroccan **Labiatae** against Botrytis cinerea Pers: Fr.
AUTHOR(S): Bouchra, Chebli; Achouri, Mohamed; Idrissi Hassani, L. M.; Hmamouchi, Mohamed
CORPORATE SOURCE: Faculte de Medecine et de Pharmacie, Biologie et Biologie Moleculaire, Biochimie, Laboratoire de Chimie, Substances Naturelles, UFR, B.P. Rabat Instituts, Rabat, 6388, Morocco
SOURCE: Journal of Ethnopharmacology (2003), 89(1), 165-169
CODEN: JOETD7; ISSN: 0378-8741
PUBLISHER: Elsevier Ireland Ltd.
DOCUMENT TYPE: Journal
LANGUAGE: English
AB **Essential oils** of seven Moroccan **Labiatae** were chem. analyzed by GC-MS and evaluated for their in vitro antifungal activity against Botrytis cinerea. Among them, Origanum compactum and Thymus glandulosus greatly inhibited the growth of the mycelium. The inhibition of Botrytis cinerea was 100% for both oils at 100 ppm, while the IC50s were 35.1 and 79.2 ppm, resp. Mentha pulegium exhibited moderate activity at 250 ppm since the inhibition of the mycelial growth was 58.5% and the IC50 was 233.5 ppm. The main constituents of the studied oils were also examd. Thymol and carvacrol that are the two main constituents of Thymus glandulosus and Origanum compactum exhibited the strongest antifungal activity with 100% of inhibition at 100 ppm, resp.
REFERENCE COUNT: 22 THERE ARE 22 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L27 ANSWER 2 OF 34 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 2003:459377 HCAPLUS
DOCUMENT NUMBER: 139:380323
TITLE: Antibacterial activity of 11 **essential oils** against Bacillus cereus in tyndallized carrot broth
AUTHOR(S): Valero, M.; Salmeron, M. C.
CORPORATE SOURCE: Escuela Politecnica Superior de Orihuela, Departamento de Produccion Vegetal y Microbiologia, Universidad Miguel Hernandez-Campus de Orihuela, Orihuela, 03312, Spain
SOURCE: International Journal of Food Microbiology (2003), 85(1-2), 73-81
CODEN: IJFMDD; ISSN: 0168-1605
PUBLISHER: Elsevier Science Ltd.
DOCUMENT TYPE: Journal
LANGUAGE: English
AB The antibacterial activity of 11 **essential oils** from arom. plants against the strain INRA L2104 of the foodborne pathogen Bacillus cereus grown in carrot broth at 16.degree. was studied. The quantity needed by the **essential oils** of nutmeg, mint, clove, oregano, cinnamon, sassafras, sage, thyme or rosemary to produce 14-1110% relative extension of the lag phase was detd. Total growth inhibition of bacterial spores was obsd. for some of the antimicrobial

agents assayed. The addn. of 5 .mu.l cinnamon **essential oil** per 100 mL of broth in combination with refrigeration temps. of .ltoreq.8.degree. produced the conditions necessary to inhibit the growth of B. cereus for at least 60 days in a model, refrigerated minimally processed food product, made with carrots and tyndallized. This is esp. important considering that the psychrotrophic enterotoxigenic strain of B. cereus INRA TZ415 was able to grow in this substrate at low temps. in the absence of any **essential oil**. Furthermore, the study of the sensory characteristics of the final product suggests that the use of cinnamon **essential oil** can be considered as an alternative to "traditional food preservatives".

REFERENCE COUNT: 46 THERE ARE 46 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L27 ANSWER 3 OF 34 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 2003:443688 HCAPLUS
DOCUMENT NUMBER: 139:2393
TITLE: Insect pest-repellent apparatus having plinth to support household furnishings and rails having insecticidal nonwoven fabric
INVENTOR(S): Yamatomi, Mitsuyo; Kawase, Shigeki
PATENT ASSIGNEE(S): Matsushita Electric Industrial Co., Ltd., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 7 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2003164249	A2	20030610	JP 2001-365844	20011130

PRIORITY APPLN. INFO.: JP 2001-365844 20011130

AB The app., which repels insect pests such as cockroaches and prevents their propagation, has a plinth, which is placed beneath an article requiring insect control, e.g. household elec. appliances, furniture, etc., and insecticides are diffused toward the plinth, e.g. using a rail having nonwoven fabric which is impregnated with liq. insecticides fed from a cartridge through a liq.-absorbing sheet and a liq.-feeding sheet and gradually releases the insecticide.

L27 ANSWER 4 OF 34 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 2003:443687 HCAPLUS
DOCUMENT NUMBER: 139:2392
TITLE: Insect pest-repellent apparatus having plinth to form space to diffuse insecticides beneath household furnishings
INVENTOR(S): Yamatomi, Mitsuyo; Kawase, Shigeki
PATENT ASSIGNEE(S): Matsushita Electric Industrial Co., Ltd., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 7 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2003164248	A2	20030610	JP 2001-365843	20011130

PRIORITY APPLN. INFO.: JP 2001-365843 20011130

AB The app., which prevents invasion of insect pests such as cockroaches, has a plinth, which is placed beneath an article requiring insect control, e.g. household elec. appliances, furniture, etc., and insecticides are

diffused into a space surrounded by the plinth using multiple nozzles linked among each other through connecting tubes. Periodical spraying of insecticides into the space effectively repels insect pests and prevents their propagation.

L27 ANSWER 5 OF 34 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 2003:154157 HCAPLUS
DOCUMENT NUMBER: 138:182524
TITLE: Plant oil and chemical compound having acaricidal activity
INVENTOR(S): Lee, Hoi-Seon
PATENT ASSIGNEE(S): S. Korea
SOURCE: PCT Int. Appl., 19 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2003015522	A1	20030227	WO 2002-KR1183	20020621

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

PRIORITY APPLN. INFO.: KR 2001-49383 A 20010816
KR 2002-28529 A 20020522

AB Acaricidal compn., comprise plant oils extd. from member selected from at least one group consisting of Pimpinella anisum, **Laurus** nobilis, Melaleuca leucadendron, Elettaria cardamomum, Pseudotsuga menziesii, Foeniculum vulgare, Ferula galbaniflua, Pelargonium odoratissimum, Pelargonium radens, Pelargonium capitatum, Helichrysum angustifolium, Andropogon muricatus, Lavandula officinalis, Origanum majorana, Melissa officinalis, Citrus aurantium, Melaleuca viridiflora, Ravensara aromatica, Sassafras albidum, Tagetes erecta, Tagetes patula, Verbena officinalis, Thujopsis dolabrata and monoterpene compds. selected at least one group consisting of carvacrol, (+)-fenchol, geraniol, linalol, (-)-cis-myrtanol, trans-myrtanol, (-)-myrtenal, (-)-myrtenol, thujone, cis-verbenol, (-)-verbenone, menthone, eugenol, menthol, and indoline. The compns. have acaricidal effect on mites, such as Dermatophagoides pteronyssinus and D. farinae.

REFERENCE COUNT: 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L27 ANSWER 6 OF 34 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 2003:44830 HCAPLUS
DOCUMENT NUMBER: 138:282730
TITLE: Inhibition of Erwinia amylovora and potential antagonistic bacteria by **essential oils** and natural compounds
AUTHOR(S): Vanneste, J. L.; Boyd, R. J.
CORPORATE SOURCE: HortResearch, Ruakura Research Centre, Hamilton, N. Z.
SOURCE: Acta Horticulturae (2002), 590(Proceedings of the IXth International Workshop on Fire Blight, 2001), 315-317
CODEN: AHORA2; ISSN: 0567-7572
PUBLISHER: International Society for Horticultural Science
DOCUMENT TYPE: Journal

LANGUAGE: English
AB Several **essential oils** have antibacterial properties, some of them have been found to inhibit Erwinia amylovora the causal agent of fire blight (Scortichini and Rossi, 1989; Vanneste, 1996). Whether or not, any of these compds. has a role in a strategy for control of fire blight has yet to be detd. In this study we looked at the potential impact on potential antagonistic bacteria (Pantoea agglomerans (formerly Erwinia herbicola) and Pseudomonas fluorescens) of some of the **essential oils** previously found inhibiting E. amylovora (Vanneste, 1996). The authors also looked at the ability of some terpenes and of other natural products (such as fungal metabolites) to inhibit E. amylovora and potential antagonistic bacteria.
REFERENCE COUNT: 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L27 ANSWER 7 OF 34 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 2003:27931 HCAPLUS
DOCUMENT NUMBER: 139:84280
TITLE: Antibacterial activity of Turkish spice hydrosols
AUTHOR(S): Sagdic, Osman; Oezcan, Musa
CORPORATE SOURCE: Faculty of Agriculture, Department of Food Engineering, Sueleyman Demirel University, Isparta, 32260, Turk.
SOURCE: Food Control (2003), 14(3), 141-143
CODEN: FOOCEV; ISSN: 0956-7135
PUBLISHER: Elsevier Science B.V.
DOCUMENT TYPE: Journal
LANGUAGE: English
AB The in vitro antibacterial activity of the hydrosols of (distd. spice water) sixteen spices (anise, basil, cumin, dalamagia sage, dill, fennel, laurel, mint, oregano, pickling herb, rosemary, sage, summer savory, seafennel, sumac and black thyme) were tested on fifteen bacteria (Bacillus amyloliquefaciens ATCC 23842, B. brevis FMC 3, B. cereus FMC 19, B. subtilis var. niger ATCC 10, Enterobacter aerogenes CCM 2531, Escherichia coli ATCC 25922, E. coli O157:H7 ATCC 33150, Klebsiella pneumoniae FMC 5, Proteus vulgaris FMC 1, Salmonella enteritidis, S. gallinarum, S. typhimurium, Staphylococcus aureus ATCC 2392, S. aureus ATCC 28213, Yersinia enterocolitica ATCC 1501). The hydrosols of five spices (anise, cumin, oregano, summer savory and black thyme) had antibacterial activity against some of the test bacteria. Oregano and summer savory were effective against all bacteria during incubation. Anise, cumin and black thyme hydrosols were active against some bacteria, but not all. Consequently, it is likely that some edible plant hydrosols may be used as antimicrobial agents to prevent the deterioration of food products. The other hydrosols did not show activity against any of the all bacteria tested.
REFERENCE COUNT: 14 THERE ARE 14 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L27 ANSWER 8 OF 34 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 2002:591669 HCAPLUS
DOCUMENT NUMBER: 137:154384
TITLE: Symbiotic regenerative compositions containing microorganisms
INVENTOR(S): Schuer, Joerg-Peter
PATENT ASSIGNEE(S): Germany
SOURCE: Eur. Pat. Appl., 25 pp.
CODEN: EPXXDW
DOCUMENT TYPE: Patent
LANGUAGE: German
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 1228769	A1	20020807	EP 2001-102384	20010202
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR				
WO 2002067986	A2	20020906	WO 2002-EP1056	20020201
WO 2002067986	A3	20031211		
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
EP 1390071	A2	20040225	EP 2002-712882	20020201
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR				
US 2004076614	A1	20040422	US 2003-467040	20031204

PRIORITY APPLN. INFO.: EP 2001-102384 A 20010202
WO 2002-EP1056 W 20020201

AB The invention concerns regenerative drugs, dietary supplements, feed additives that contain microorganisms and modulating substances, e.g. enzymes, GRAS (Generally Recognized As Safe) aromas, plant exts. Further the compns. contain vitamins, minerals, growth promoters, carrier substances, etc. Microorganisms are a-pathogenic, pathogenic or facultative pathogenic,.

REFERENCE COUNT: 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L27 ANSWER 9 OF 34 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 2002:562913 HCAPLUS
DOCUMENT NUMBER: 137:243392
TITLE: The potential use of plant volatiles for the control of stored product insects and quarantine pests in cut flowers
AUTHOR(S): Kostyukovsky, M.; Ravid, U.; Shaaya, E.
CORPORATE SOURCE: The Volcani Center, Bet Dagan, 50250, Israel
SOURCE: Acta Horticulturae (2002), 576(Proceedings of the International Conference on Medicinal and Aromatic Plants, 2001), 347-358
CODEN: AHORA2; ISSN: 0567-7572
PUBLISHER: International Society for Horticultural Science
DOCUMENT TYPE: Journal
LANGUAGE: English

AB Currently, the measures to control pest infestation in grain and dry food products as well as quarantine treatments rely heavily upon the use of toxic fumigants and contact insecticides, which pose possible health hazards and risk of environmental contamination. This situation has led to the search for potential safe phyto-chems. as alternatives to replace the toxic fumigants mainly Me bromide and other **pesticides** for insect control. The fumigant activity of a large no. of **essential oils** and **essential oil** components extd. from arom. plants was evaluated on the major stored product insects Sitophilus oryzae, Rhizopertha dominica, Tribolium castaneum, Oryzaephilus surinamensis, Ephestia cautella, and also on the cut flowers quarantine pests Bemisia tabaci, Frankliniella occidentalis and Liriomyza huidobrensis. In this studies we could show that several compds. were found to be active fumigants at low concns. The most active compd. has proved to have similar potency as Me bromide against major insect pests of dry stored food. In space fumigation, at a mere concn. of 0.5-1.5 mg/L

air equiv. to 0.5-1.5 g/m3 killed all adult insects after a 24 h exposure. In pilot tests, using wheat, low concns. of 50-70 g oil/m3 grain were needed to obtain effective control of the test insects, compared with the recommended concn. of Me bromide of 30-50 g/m3. Addn. of CO2 increased the activity of the oils and facilitated the penetration of these compds. in fumigated grain. Studies with cut flowers quarantine insects showed also great promise. A concn. of 10 g and 20 g/m3 and exposure time of 2 and 4 h resp. were enough to get 100% adult mortality of B. tabaci and F. occidentalis, and 50-60 g/m3 after 2 h exposure were need to kill L. huidobrensis larvae.

REFERENCE COUNT: 34 THERE ARE 34 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L27 ANSWER 10 OF 34 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 2002:543122 HCAPLUS
DOCUMENT NUMBER: 137:122139
TITLE: The in vitro action of **essential oils** on different organisms
AUTHOR(S): Giamperi, Laura; Fraternale, Daniele; Ricci, Donata
CORPORATE SOURCE: Instituto di Botanica e Orto Botanico "Pierina Scaramella", Urbino, 61029, Italy
SOURCE: Journal of Essential Oil Research (2002), 14(4), 312-318
CODEN: JEOREG; ISSN: 1041-2905
PUBLISHER: Allured Publishing Corp.
DOCUMENT TYPE: Journal
LANGUAGE: English

AB The antifungal action of eight (Lavandula hybrid, Salvia officinalis L., Rosmarinus officinalis L., Thymus vulgaris L., Origanum vulgare L., Mentha piperita L., Coriandrum sativum L. and **Laurus** nobilis L.) **essential oils** was tested in vitro against Phytophthora cinnamomi Rads., Pyrenochaeta lycopersici Kleb. and Verticillium dahliae Kleb., using different concns. (up to 1600 ppm). The fungistatic + fungicidal activity of the oils was detd., and the most effective **essential oils** were found to be those of oregano, thyme, peppermint and coriander. Moreover, the oils were tested to det. the antifungal activity against two fungi (Candida albicans, Trichophyton mentagrophytes) that are pathogens for humans.

REFERENCE COUNT: 25 THERE ARE 25 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L27 ANSWER 11 OF 34 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 2002:536856 HCAPLUS
DOCUMENT NUMBER: 137:268115
TITLE: Composition and antifungal activity of **essential oil** from Perilla frutescens leaves
AUTHOR(S): Cai, Y.; Jiang, J. G.; Liu, C. H.; Kong, L. D.; Tan, R. X.
CORPORATE SOURCE: Institute of Functional Biomolecule, State Key Laboratory of Pharmaceutical Biotechnology, School of Life Sciences, Nanjing University, Nanjing, Peop. Rep. China
SOURCE: International Pest Control (2002), 44(2), 66-68
CODEN: IPCLBZ; ISSN: 0020-8256
PUBLISHER: Research Information Ltd.
DOCUMENT TYPE: Journal
LANGUAGE: English

AB The chem. compn. of **essential oil** obtained from Perilla frutescens (**Labiatae**) leaves was established by GC and GC/MS methods. Among the twenty identified constituents comprising 91.8% of the total oil, the major components were decahydro-1,6-dimethyl-naphthalene; (1E, 3a..alpha.., 7a..beta..)-1-ethylideneoctahydro-7.alpha.-

methyl-1H-indene; 4,11,11-trimethyl-8-methylene-bicyclo[7.2.0]undec-4-ene; apiole; and patchouri alc. with their contents in the oil estd. to be 13.0%, 10.4%, 13.4%, 14.9% and 10.4%, resp. The in vitro bioassay showed that the oil exhibited remarkable inhibition to all of the eleven test phytopathogenic fungi, of which Gaeumannomyces graminis var. tritici, Rhizoctonia cerealis were most susceptible with the same min. inhibition concn. (MIC) of 150 .mu.gml-1. The MICs against the two fungi of triadimefon, a com. antifungal agent used here as the pos. control, were 125 and 100 .mu.gml-1, resp. These results highlighted a possibility that the antifungal oil of P. frutescens could be valuable for the control of some fungi-caused diseases such as "take-all", which leads annually to a 16% loss of wheat prodn.

REFERENCE COUNT: 11 THERE ARE 11 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L27 ANSWER 12 OF 34 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 2002:92832 HCAPLUS
DOCUMENT NUMBER: 136:196889
TITLE: In vitro susceptibility of Japanese mint (Mentha arvensis L.) **essential oil** against five human pathogens
AUTHOR(S): Rath, Chandi C.; Dash, S. K.; Mishra, R. K.
CORPORATE SOURCE: Centre for Post-graduate Studies in Microbiology, Orissa University of Agriculture and Technology, Bhubaneshwar, 751 003, India
SOURCE: Indian Perfumer (2001), 45(1), 57-61
CODEN: IPERAS; ISSN: 0019-607X
PUBLISHER: Essential Oil Association of India
DOCUMENT TYPE: Journal
LANGUAGE: English

AB **Essential oil** of the leaf of Japanese mint (Mentha arvensis L.; **Labiatae**) was found fungicidal against human pathogens, viz. Candida albicans, Cryptococcus neoformans, Sporothrix schenckii, Microsporum gypseum, and Trichophyton rubrum. The min. inhibitory concns. were obsd. for C. albicans and C. neoformans (< 1 .mu.l/mL), followed by M. gypseum (1.95 .mu.l/mL), S. schenckii (3.90 .mu.l/mL) and T. rubrum (62.5 .mu.l/mL) resp. The activity was temp. independent and occurred both at 28.degree. and 4.degree.C. Pure oil showed quicker fungicidal activity in comparison to MIC levels of oil in the medium. The activity was compared with antifungal drugs like clotrimazole, fluconazole, itraconazole, griseofulvin, amphotericin B, and nystatin.

REFERENCE COUNT: 11 THERE ARE 11 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L27 ANSWER 13 OF 34 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 2002:92828 HCAPLUS
DOCUMENT NUMBER: 136:366392
TITLE: Chemical composition and biological activity of **essential oil** of Pogostemon plectranthoides Desf.
AUTHOR(S): Singh, Dhananjaya P.; Pant, A. K.
CORPORATE SOURCE: Department of Chemistry, Govind Ballabh Pant University of Agriculture and Technology, Pantnagar, 263145, India
SOURCE: Indian Perfumer (2001), 45(1), 35-38
CODEN: IPERAS; ISSN: 0019-607X
PUBLISHER: Essential Oil Association of India
DOCUMENT TYPE: Journal
LANGUAGE: English

AB Significant chem. variations have been found in the **essential oil** compn. of Pogostemon plectranthoides Desf. (**Labiatae**) growing in the Kumaon region of Uttaranchal. The oil was rich in

hydrocarbons such as .alpha.-phellandrene, .beta.-caryophyllene, .beta.-bisabolol, and .alpha.- and .gamma.-patchulene. The presence of a major compd. at Rt 46 min with M+ at m/e 214 was also noticed. The oil showed pronounced antifungal activity against a no. of phytopathogenic fungi and markedly inhibited the feeding by larvae of a lepidopteran problem pest in a no-choice bioassay.

REFERENCE COUNT: 8 THERE ARE 8 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L27 ANSWER 14 OF 34 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 2001:771422 HCAPLUS
DOCUMENT NUMBER: 136:179278
TITLE: Repellent, toxic and reproduction inhibitory effects of **essential oil** vapours on Acanthoscelides obtectus (Say) (Coleoptera: Bruchidae)
AUTHOR(S): Papachristos, D. P.; Stamopoulos, D. C.
CORPORATE SOURCE: Laboratory of Applied Zoology and Parasitology, University of Thessaloniki, Thessaloniki, 540 06, Greece
SOURCE: Journal of Stored Products Research (2001), Volume Date 2002, 38(2), 117-128
CODEN: JSTPAR; ISSN: 0022-474X
PUBLISHER: Elsevier Science Ltd.
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Thirteen **essential oils** (Apium graveolens, Citrus sinensis, Eucalyptus globulus, Juniperus oxycedrus, **Laurus** nobilis, Lavandula hybrida, Mentha microphylla, Mentha viridis, Ocimum basilicum, Origanum vulgare, Pistacia terebinthus, Rosmarinus officinalis, and Thuja orientalis) were tested in their vapor form against Acanthoscelides obtectus. Choice and no-choice tests revealed that most of them have a repellent action, reduce fecundity, decrease egg hatchability, increase neonate larval mortality and adversely influence offspring emergence. Furthermore, some oils were strongly toxic to A. obtectus, males appearing more susceptible than females. Among the **essential oils** tested, the most toxic for males were those of M. microphylla and M. viridis whereas the most toxic against females were those of L. hybrida and R. officinalis.
REFERENCE COUNT: 27 THERE ARE 27 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L27 ANSWER 15 OF 34 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 2001:578597 HCAPLUS
DOCUMENT NUMBER: 135:124156
TITLE: Bactericide combinations in detergents
INVENTOR(S): Elsmore, Richard; Houghton, Mark Phillip
PATENT ASSIGNEE(S): Robert McBride Ltd., UK
SOURCE: Brit. UK Pat. Appl., 53 pp.
CODEN: BAXXDU
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
GB 2354771	A1	20010404	GB 1999-23253	19991001

PRIORITY APPLN. INFO.: GB 1999-23253 19991001
AB The detergent comprises a bactericide in combination with an anionic, cationic, nonionic or amphoteric surfactant which has a C12-18 alkyl group as the longest chain attached to the hydrophilic moiety. Creduret 50 (hydrogenated ethoxylated castor oil) 50, citric acid 12, formalin 10, sodium alkyl benzene sulfonate (C12-20) alkyl 1, perfume white line 0.5,

detergent enzyme savingase 0.2, and bactericide Pr 4-hydroxybenzoate 1.0 parts formed a detergent, showing redn. activity after contact 2.

L27 ANSWER 16 OF 34 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 2001:538654 HCAPLUS
DOCUMENT NUMBER: 135:329111
TITLE: Impedance measurements to study the antimicrobial activity of **essential oils** from Lamiaceae and Compositae
AUTHOR(S): Marino, M.; Bersani, C.; Comi, G.
CORPORATE SOURCE: Department of Food Science, University of Udine, Udine, 33100, Italy
SOURCE: International Journal of Food Microbiology (2001), 67(3), 187-195
CODEN: IJFMDD; ISSN: 0168-1605
PUBLISHER: Elsevier Science Ltd.
DOCUMENT TYPE: Journal
LANGUAGE: English
AB A wide range of **essential oils** from sage, mint, hyssop, chamomile and oregano were tested for their inhibitory effects against nine strains of Gram-neg. bacteria and six strains of Gram-pos. bacteria. Three principles were used in describing the antimicrobial effects of the **essential oils**: the overall antimicrobial activity detd. by use of an impedometric method, the bactericidal effect detd. as colony forming units after exposure to the **essential oils**, and the no. of apparent dead cells detd. after further enrichment. The data indicate that while the **essential oils** of sage, mint, hyssop and chamomile had generally a bacteriostatic activity, the **essential oil** from oregano appeared to be bactericidal at concns. above 400 ppm, probably because of high contents in phenolic compds. For the other **essential oils**, the chem. anal. was unable to explain the antimicrobial effect. The bacteriostatic activity was more marked against Gram-pos. bacteria; in contrast, the bactericidal activity was greatest against Gram-neg. bacteria. The most sensitive strain was Escherichia coli O157:H7 and, of the Gram-pos. species even at the lowest oil concns., Listeria innocua was the most sensitive. The data obtained from the study of the bactericidal effect of oregano **essential oil** indicated that the major part of the species was irreversibly inactivated, i.e. they could not be revived by enrichment.
REFERENCE COUNT: 42 THERE ARE 42 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L27 ANSWER 17 OF 34 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 2001:508681 HCAPLUS
DOCUMENT NUMBER: 135:177910
TITLE: Antimicrobial activity of the **essential oils** of Turkish plant spices
AUTHOR(S): Ozcan, M.; Erkmen, Osman
CORPORATE SOURCE: Department of Food Engineering, Faculty of Agriculture, University of Selcuk, Konya, 42031, Turk.
SOURCE: European Food Research and Technology (2001), 212(6), 658-660
CODEN: EFRTFO; ISSN: 1438-2377
PUBLISHER: Springer-Verlag
DOCUMENT TYPE: Journal
LANGUAGE: English
AB The antimicrobial activity of the **essential oils** of 9 plant spices (savory, laurel, oregano, basil, cumin, seafennel, myrtle, pickling herb, and mint) were tested at 3 concns. (1, 10, and 15%) and tested on various microorganisms (Salmonella typhimurium, Bacillus cereus, Staphylococcus aureus, Enterococcus faecalis, Escherichia coli, Yersinia enterocolitica, Saccharomyces cerevisiae, Candida rugosa, Rhizopus oryzae,

and Aspergillus niger). The results showed that the **essential oils** tested varied in their antimicrobial activity. Individual or combinations of plant **essential oils** may provide an efficacious mixt. for the inactivation of pathogenic and spoilage microorganisms, and to achieve adequate shelf-life of foods.
REFERENCE COUNT: 18 THERE ARE 18 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L27 ANSWER 18 OF 34 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 2001:301273 HCAPLUS
DOCUMENT NUMBER: 134:350532
TITLE: In vitro fungistatic effect of **essential oils** against Ascosphaera apis
AUTHOR(S): Larran, Silvina; Ringuelet, Jorge A.; Carranza, Marcelo R.; Henning, Cynthia P.; Re, Maria S.; Cerimele, Elsa L.; Urrutia, Maria I.
CORPORATE SOURCE: Facultad de Ciencias Agrarias y Forestales Universidad Nacional de La Plata, La Plata, 1900, Argent.
SOURCE: Journal of Essential Oil Research (2001), 13(2), 122-124
CODEN: JEOREG; ISSN: 1041-2905
PUBLISHER: Allured Publishing Corp.
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Different **essential oils** were tested against the fungus Ascosphaera apis, the causal agent of chalkbrood disease of honey bees. **Essential oils** from lavandin (Lavandula .times. intermedia), coriander (Coriandrum sativum), laurel leaf (**Laurus** nobilis), false camphor (Cinnamomum glandulifera), basil (Ocimum basilicum), tagetes (Tagetes minuta), rosemary (Rosmarinus officinalis) and eucalyptus (Eucalyptus globulus) were assayed to prove their fungistatic activity at different concns.: 700, 800, and 900 .mu.L/L. Strains of Ascosphaera apis were collected from apiaries of different places of Buenos Aires province (Argentina). At all concns. tested, coriander oil was the most effective fungistatic control while basil and tagetes oils were effective only at 800 .mu.L/L. No differences in effectiveness of oils were obsd. against the different strains of Ascosphaera apis.
REFERENCE COUNT: 11 THERE ARE 11 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L27 ANSWER 19 OF 34 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 2001:167794 HCAPLUS
DOCUMENT NUMBER: 134:227364
TITLE: Composition containing organic phenols for treatment of infections of humans and animals
INVENTOR(S): Ninkov, Dusan
PATENT ASSIGNEE(S): Van Beek Global/Ninkov L.L.C., USA
SOURCE: PCT Int. Appl., 77 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2001015680	A1	20010308	WO 2000-US22640	20000817
WO 2001015680	C2	20020912		
WO 2001015680	C1	20031023		

W: AE, AG, AL, AM, AT, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, CZ, DE, DE, DK, DK, DM, DZ, EE, EE, ES, FI, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR,

KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG

US 6414036	B1	20020702	US 2000-499197	20000207
EP 1207865	A1	20020529	EP 2000-955671	20000817
EP 1207865	B1	20030806		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL				
AT 246498	E	20030815	AT 2000-955671	20000817
NZ 517585	A	20030829	NZ 2000-517585	20000817
US 2003032678	A1	20030213	US 2002-143096	20020510
US 6649660	B2	20031118		

PRIORITY APPLN. INFO.:	US 1999-151858P	P	19990901
	US 2000-499197	A2	20000207
	WO 2000-US22640	W	20000817

AB This disclosure provides pharmaceutical compns. which include oil ext. from plants from the **Labiatae** family showing activity against bacterial, fungal, protozoan, and yeast infections. In particular, the compns. can be formulated by combining exts. of **essential oils** from plants of the **Labiatae** and Verbenacea families with an org. acid or a Group I salt. It is believed that the antimicrobial activity of the pharmaceutical compn. is due to the presence of org. phenols, such as isopropyl-o-cresol, in the oil ext. from the plants. For example, a 10% liq. formulation was prepd. by combining 48.5 mL org. phenolic Na salt (Na p-cresol, SPC, prepd. from isopropyl-o-cresol and NaCl), 48.5 mL org. phenolic K salt (K p-cresol, PPC, prepd. from isopropyl-o-cresol and KCl), 1.5 mL org. phenolic Na salt (Na M cresol, SMC, prepd. from iso-Pr cresol and NaCl), 1.5 mL org. phenolic K salt (K M cresol, PMC, prepd. from iso-Pr cresol and KCl), and 900 mL of a liq. carrier contg. polysorbate 80 (30% by wt.) as an emulsifier, EtOH (20% by wt.) and polyethylene glycol (40% by wt.). The combination was mixed at room temp. for 7 min at a speed of 1700 RPM to form a final (10%) soln. contg. a ratio of SPC and PPC to SMC and PMC of 97:3. The formulation showed in vitro inhibition zones against Escherichia coli, Salmonella typhimurium, and Staphylococcus aureus of 43, 20, and 39 mm , resp., while in neg. control petri dishes the bacterial species grew throughout the whole plate.

REFERENCE COUNT: 2 THERE ARE 2 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L27 ANSWER 20 OF 34 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER:	2001:90726 HCAPLUS
DOCUMENT NUMBER:	135:293793
TITLE:	Volatile aroma constituents of three **Labiatae** herbs growing wild in the Karakoram-Himalaya district and their antifungal activity by vapor contact
AUTHOR(S):	Inouye, Shigeharu; Uchida, Katsuhisa; Yamaguchi, Hideyo; Miyara, Takako; Gomi, Shuichi; Amano, Makoto
CORPORATE SOURCE:	Teikyo University Institute of Medical Mycology, Hachioji, 192-0395, Japan
SOURCE:	Journal of Essential Oil Research (2001), 13(1), 68-72 CODEN: JEOREG; ISSN: 1041-2905
PUBLISHER:	Allured Publishing Corp.
DOCUMENT TYPE:	Journal
LANGUAGE:	English

AB Et acetate exts. from the flowers and leaves of Perovskia abrotanoides Karel., Nepeta juncea Benth., and Thymus linearis Beneth. growing wild at 2000-3500 m a.s.l. in the Karakoram-Himalaya district were analyzed by GC/MS. The major volatile constituents were 1,8-cineole (24.4-27.1%) and

.alpha.-pinene (18.2-23.2%) for P. abrotanoides, and nepetalactone (71.8%) for N. juncea. 2 Chemotypes of T. linearis were found in different area, a thymol/carvacrol type in the areas of Hunza and Rupal Valley, and a geraniol/geranyl acetate type in the area of Rakaposhi Valley. Herbs and their major constituents of N. juncea and T. linearis showed potent antifungal activity by vapor contact, but those of P. abrotanoides showed no significant activity.

REFERENCE COUNT: 36 THERE ARE 36 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L27 ANSWER 21 OF 34 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 2000:812138 HCAPLUS
DOCUMENT NUMBER: 134:54072
TITLE: Bacterial colonization of phyllosphere of Mediterranean aromatic plants
AUTHOR(S): Karamanoli, K.; Vokou, D.; Menkissoglu, U.; Constantinidou, H.-I.
CORPORATE SOURCE: Laboratory of Agricultural Chemistry, School of Agriculture, Aristotle University, Thessaloniki, GR-54 006, Greece
SOURCE: Journal of Chemical Ecology (2000), 26(9), 2035-2048
CODEN: JCECD8; ISSN: 0098-0331
PUBLISHER: Kluwer Academic/Plenum Publishers
DOCUMENT TYPE: Journal
LANGUAGE: English

AB The influence of secondary metabolites on the bacterial colonization of the phyllosphere of four arom. species of the Mediterranean region was studied for the detn. of total bacterial populations (TBP) and populations of ice nucleation active bacteria (INA). The arom. plants used were lavender (Lavandula angustifolia), rosemary (Rosmarinus officinalis), Greek sage (Salvia fruticosa), and Greek oregano (Origanum vulgare subsp. hirtum), all growing in neighboring sites. Lavender was heavily colonized by bacteria, whereas rosemary, sage, and oregano were poorly colonized. The differences in bacterial colonization were related to the plants' content of secondary metabolites and their antimicrobial activity, as recorded in the in vitro bioassays. Lavender had the lowest amt. of surface phenolics, the lowest concn. of **essential oil**, and the overall weakest antibacterial activity. Among the epiphytic bacteria, ice nucleation active ones were not detected on oregano and sage leaves but were found in extremely low nos. on those of rosemary and lavender. For this reason, these arom. plants were further studied regarding their effect against two INA bacteria, Pseudomonas syringae and Erwinia herbicola. Min. inhibitory concns. and min. bactericidal concns. were estd. for the **essential oils** and for their main constituents under different bacterial populations. The antibacterial effect of **Labiatae** arom. plants against INA bacteria not only explains the scare presence of the latter on their leaves but may have applications in agriculture as a frost-control method for sensitive crops.

REFERENCE COUNT: 25 THERE ARE 25 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L27 ANSWER 22 OF 34 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 2000:259917 HCAPLUS
DOCUMENT NUMBER: 132:261680
TITLE: **Essential oils** as **pesticides**
INVENTOR(S): Tuzun, Sadik; Yegen, Oktay
PATENT ASSIGNEE(S): Auburn University, USA
SOURCE: PCT Int. Appl., 89 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2000021364	A2	20000420	WO 1999-US23399	19991008
WO 2000021364	A3	20000810		
W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
CA 2346763	AA	20000420	CA 1999-2346763	19991008
EP 1119257	A2	20010801	EP 1999-954778	19991008
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
NZ 511021	A	20030829	NZ 1999-511021	19991008
PRIORITY APPLN. INFO.:			US 1998-103805P P	19981009
			WO 1999-US23399 W	19991008

AB A compn. to repel or kill insects, fungi, nematodes and bacteria, comprising, as an active ingredient, an **essential oil** or a component thereof, wherein said **essential oil** or component thereof is derived from at least one plant species in the Family **Labiatae** and **Umbellifera** is disclosed. Specifically, the **essential oils** are from Thymbra, Satureja, Origanum, Corydothymus, Pinpinella or Foeniculum. The **essential oil** components are cis- and trans-anethole, anisaldehyde, anis ketone, .beta.-bisabolene, borneol, bornyl acetate, cadidene, camphene, camphor, .DELTA.-3- and .DELTA.-4-carene, caryophyllene, carvone, carvacrol, .gamma.-caryophyllene, cinnamic aldehyde, citral, citronellal, cineol, etc.

L27 ANSWER 23 OF 34 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1999:755236 HCAPLUS
DOCUMENT NUMBER: 132:313405
TITLE: Volatile constituents and antimicrobial activity of Zataria multiflora, population Iran
AUTHOR(S): Shafiee, Abbas; Javidnia, Katayon; Tabatabai, Mojtaba
CORPORATE SOURCE: Department of Chemistry, The Medical Sciences University of Tehran, Tehran, 14174, Iran
SOURCE: Iranian Journal of Chemistry & Chemical Engineering (1999), 18(1), 1-5
CODEN: IJCEE9; ISSN: 1021-9986
PUBLISHER: Jahad Daneshgahi
DOCUMENT TYPE: Journal
LANGUAGE: English
AB The **essential oils** of Z. multiflora (**Labiatae**) from 4 regions of Iran were investigated by GC and GC-MS methods. The main constituents were carvacrol, thymol, linalool and p-cymene. The percent of the constituents (in dry and wet plant) of different regions were compared. Antibacterial and antifungal effects of these **essential oils** were studied. The **essential oil** with highest percentage of thymol and carvacrol had a significant antimicrobial activity.
REFERENCE COUNT: 10 THERE ARE 10 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L27 ANSWER 24 OF 34 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1998:807556 HCAPLUS
DOCUMENT NUMBER: 130:135340

TITLE: Dissipation of propiconazole and tebuconazole in peppermint crops (Mentha piperita (**Labiatae**)) and their residues in distilled oils
AUTHOR(S): Garland, Sandra M.; Menary, Robert C.; Davies, Noel W.
CORPORATE SOURCE: Department of Agricultural Science, University of Tasmania, Hobart, 7001, Australia
SOURCE: Journal of Agricultural and Food Chemistry (1999), 47(1), 294-298
CODEN: JAFCAU; ISSN: 0021-8561
PUBLISHER: American Chemical Society
DOCUMENT TYPE: Journal
LANGUAGE: English

AB The broad-spectrum, systemic **fungicides** propiconazole and tebuconazole are used to control rust in peppermint (Mentha piperita L.). An anal. method, using gas chromatog. combined with detection by high-resoln. mass spectrometry, was developed to allow for the simultaneous monitoring of both **pesticides** in peppermint leaves and oil. Field trials were established to det. the rate of dissipation of tebuconazole and propiconazole in peppermint crops. Three applications of each **fungicide** were trialed at two rates (125 and 250 g of active ingredient (ai)/ha). At harvest, 64 days after the final application, propiconazole was detected at levels of 0.06 mg/kg and 0.09 mg/kg of dry wt., and tebuconazole was detected at 0.26 and 0.80 mg/kg dry wt., in identical trials. Rates of dissipation of propiconazole and tebuconazole were lower at a second trial site, where three applications of 125 g/ha ai for each **fungicide** resulted in residue levels of 0.21 mg/kg for both **pesticides**, detected 89 days after the last application. Propiconazole and tebuconazole were detected in the distd. oil at levels between 0.02 and 0.05 mg/kg and between 0.011 and 0.041 mg/kg, resp. Propiconazole had a higher tendency to co-distill with the peppermint oil, with 0.7% of that present in the vegetative material ending up in the oil, compared to 0.09% of tebuconazole.

REFERENCE COUNT: 19 THERE ARE 19 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L27 ANSWER 25 OF 34 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1998:535721 HCAPLUS
DOCUMENT NUMBER: 129:166247
TITLE: Essence of **Labiatae** as transdermal absorption enhancer, and topical preparations containing the enhancer
INVENTOR(S): Honda, Yoshiaki; Yokomizo, Yuichi
PATENT ASSIGNEE(S): Pola Chemical Industries, Inc., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 8 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 10218796	A2	19980818	JP 1997-25459	19970207
JP 3445716	B2	20030908		

PRIORITY APPLN. INFO.: JP 1997-25459 19970207

AB Topical prepns. contain active ingredients (e.g. anti-inflammatory agents or microbicides) and essence of **Labiatae** as transdermal absorption enhancer. A lotion contg. tenoxicam and essence of Perilla frutescens var. crispa showed good bioavailability through isolated guinea pig skin.

L27 ANSWER 26 OF 34 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1997:775109 HCAPLUS

DOCUMENT NUMBER: 128:45760
TITLE: Antifungal activity of the **essential oil** of Hyptis suaveolens and its efficacy in biocontrol measures in combination with Trichoderma harzianum
AUTHOR(S): Singh, H. B.; Handique, A. K.
CORPORATE SOURCE: School of Agricultural Sciences & Rural Development, North-Eastern Hill University, Medziphema, 797 106, India
SOURCE: Journal of Essential Oil Research (1997), 9(6), 683-687
CODEN: JEOREG; ISSN: 1041-2905
PUBLISHER: Allured Publishing Corp.
DOCUMENT TYPE: Journal
LANGUAGE: English
AB The **essential oil** from the leaves of Hyptis suaveolens (L.) Poit. (Family-**Labiatae**), a herbaceous annual weed, displayed significant antifungal activity against the soil-borne sclerotial fungi, Rhizoctonia solani, Sclerotium rolfsii and Sclerotinia sclerotiorum. Treatment with the oil drastically reduced the ascospore germination of S. sclerotiorum. More importantly, the oil in combination with antagonistic fungus Trichoderma harzianum controlled wilt and rot diseases of knol-khol (Brassica caulorapa Pasq.) caused by S. sclerotiorum. The oil appears to inhibit the fungal growth, but does not destroy the viability of the three sclerotial fungi.
REFERENCE COUNT: 15 THERE ARE 15 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L27 ANSWER 27 OF 34 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1996:586506 HCAPLUS
DOCUMENT NUMBER: 125:230313
TITLE: Analysis of the **essential oil** of **Laurus** nobilis L.
AUTHOR(S): Soliman, F. M.; El-Kashoury, E. A.; El-Fishawy, A. M.; El-Kawy, M. A. Abd
CORPORATE SOURCE: Department Pharmacognosy, Faculty Pharmacy, Cairo, 11562, Egypt
SOURCE: Bulletin of the Faculty of Pharmacy (Cairo University) (1994), 32(3), 387-389
CODEN: BFPHA8; ISSN: 1110-0931
PUBLISHER: Cairo University, Faculty of Pharmacy
DOCUMENT TYPE: Journal
LANGUAGE: English
AB The compn. of the oil prepd. from the leaves of **Laurus** nobilis L. was detd. by gas chromatog.-mass spectrometry (GC-MS) techniques. Twenty-eight components representing >98% of the oil compn. were identified. The main constituents were: 1,8-cineole (37.58%), p-cymene (19.83%), .alpha.-terpinenyl acetate (7.14%), myrcene (4.68%), .beta.-pinene (3.73%), 4- and .alpha.-terpineols, linalool, and Me eugenol. The oil showed a moderate antifungal activity against Candida albicans, Cryptococcus neoformans and Mycobacterium intracellulare, when compared with amphotericin B.

L27 ANSWER 28 OF 34 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1995:786243 HCAPLUS
DOCUMENT NUMBER: 123:193416
TITLE: Antimicrobial activity of essences from **labiates**
AUTHOR(S): Larrondo, Jorge V.; Agut, M.; Calvo-Torras, M. A.
CORPORATE SOURCE: Fac. Veterinary Sci., Univ. Autonoma de Barcelona, Bellaterra, 08193, Spain
SOURCE: Microbios (1995), 82(332), 171-2
CODEN: MCBIA7; ISSN: 0026-2633

PUBLISHER: Faculty Press
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Bacteria, filamentous fungi and yeasts were subjected to the action of Lavandula officinalis, Melissa officinalis and Rosmarinus officinalis essences in a steam phase, using a microatmospheric technique. Due to the methodol. employed, L. officinalis essence was more active in filamentous fungi than the other **essential oils** studied. All three essences possessed a similar degree of activity against the microorganisms tested, though a relatively higher activity was seen in the case of M. officinalis.

L27 ANSWER 29 OF 34 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1993:535400 HCAPLUS
DOCUMENT NUMBER: 119:135400
TITLE: Antibacterial properties of the Vietnamese Cajeput oil and Ocimum oil in combination with **antibacterial agents**
AUTHOR(S): Jedlickova, Z.; Mottl, O.; Sery, V.
CORPORATE SOURCE: Postgrad. Med. Pharm. Inst., Prague, 128 00, Czech.
SOURCE: Journal of Hygiene, Epidemiology, Microbiology, and Immunology (1992), 36(3), 303-9
CODEN: JHEMA2; ISSN: 0022-1732
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Main antibacterially active agents obtained from Cajeput **essential oil** (1,8 cineol, linalool, .alpha.-terpineol and terpinen-4-ol) for example from Melalleuce leucadendron (Myrtaceae) as well as **essential oil** from Ocimum gratissimum (**Labiate**) were combined in tests in vitro with selected antibiotics. The above mentioned plant products were found to be effective medicaments for local application in modern medical practice. Combinations with antibodies potentiated their therapeutical action. On the basis of tests in vitro the synergistic action of these two kinds of medicaments, i.e., prepns. traditionally used for a few last decades - antibiotics - might be well applied for therapeutical needs.

L27 ANSWER 30 OF 34 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1993:513197 HCAPLUS
DOCUMENT NUMBER: 119:113197
TITLE: Potential use of the **essential oil** of Trachyspermum ammi against seed-borne fungi of Guar (Cyamopsis tetragonoloba L. (Taub.))
AUTHOR(S): Dwivedi, Suresh K.; Dubey, N. K.
CORPORATE SOURCE: Cent. Adv. Study Bot., Banaras Hindu Univ., Varanasi, India
SOURCE: Mycopathologia (1993), 121(2), 101-4
CODEN: MYCPAH; ISSN: 0301-486X
DOCUMENT TYPE: Journal
LANGUAGE: English
AB **Essential oils** isolated from leaves and seeds of 7 **umbelliferous** plants were tested against the growth of Aspergillus flavus. Those from seeds of Trachyspermum ammi, Cuminum cyminum, carum carvi, Daucus carota and from leaves of Anethum graveolens exhibited antifungal activity against the test fungus. Amongst these, oil from seeds of Trachyspermum ammi was most toxic. Its min. inhibitory concn. was 300 ppm, at which it exhibited fungistatic but not phytotoxic properties, when tested at 200, 300 and 400 ppm. The fungitoxic potency of Trachyspermum seed oil remained unchanged after a long storage period and at high inoculum d. of the test fungus. The oil was thermostable and was more effective than the **fungicides** Agrosan G. M., Benlate, Ceresan, Dithane M-45 and Thiovit commonly used for the control of plant diseases.

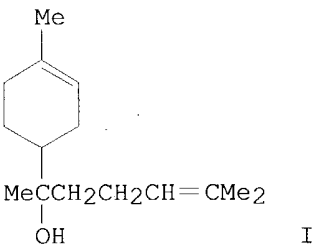
L27 ANSWER 31 OF 34 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1986:548152 HCAPLUS
DOCUMENT NUMBER: 105:148152
TITLE: Studies of the effects of **essential oils** isolated from 14 species of **Labiatae** on the carmine spider mite, Tetranychus cinnabarinus
AUTHOR(S): Mansour, F.; Ravid, U.; Putievsky, E.
CORPORATE SOURCE: Dep. Entomol., ARO, Haifa, Israel
SOURCE: Phytoparasitica (1986), 14(2), 137-42
CODEN: PHPRA2; ISSN: 0334-2123
DOCUMENT TYPE: Journal
LANGUAGE: English
AB **Essential oils** from 14 species of **Labiatae** were steam-distd. and analyzed. Bean leaf disks freshly sprayed with different concns. of the acetonic solns. of the oils caused mortality and induced repellency in adult females of the carmine spider mite, T. cinnabarinus, and egg-laying was reduced. Seven-day-old residues still had some activity. On the basis of median effective concn. values, the most effective oils were: Lavandula angustifolia .times. L. latifolia (0.09%); L. angustifolia (0.1%); Melissa officinalis (0.12%); Mentha piperita (1.3%); Salvia fruticosa (1.4%); Ocimum basilicum (1.4%); and Rosmarinus officinalis (2.2%).

L27 ANSWER 32 OF 34 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1986:126563 HCAPLUS
DOCUMENT NUMBER: 104:126563
TITLE: Bupleurum fruticosum L. (fam. **Umbelliferae**), an interesting shrub of the northern Moroccan flora
AUTHOR(S): Manunta, Antonio
CORPORATE SOURCE: Fac. Farm., Univ. Sassari, Sassari, Italy
SOURCE: Actes - Colloq. Int. Plant. Aromat. Med. Maroc, 1st (1985), Meeting Date 1984, 271-84. Editor(s): Bellakhdar, Jamal. Cent. Natl. Coord. Planif. Rech. Sci. Tech.: Rabat, Morocco.
CODEN: 54YJA2
DOCUMENT TYPE: Conference
LANGUAGE: French
AB Saikosaponins of undefined structure were isolated from the roots of B. frutisosum (7.5% of dry wt.). The antiinflammatory properties of the crude ext. were demonstrated on male Wistar rats. Aerial parts of the plant yielded an **essential oil** fraction, the primary constituents of which were .beta.-phellandrene (64.5%) and sabinene (20.7%). The **essential oil** fraction showed antimicrobial activity towards Streptococcus and Staphylococcus, and was particularly effective against Candida albicans.

L27 ANSWER 33 OF 34 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1979:569127 HCAPLUS
DOCUMENT NUMBER: 91:169127
TITLE: Antimicrobial activity of the **essential oil** from Leucas stelligera Wall (**Labiatae**)
AUTHOR(S): Sharma, G. P.; Jain, N. K.; Garg, B. D.
CORPORATE SOURCE: Dep. Chem., Holkar Sci. Coll., Indore, India
SOURCE: Indian Drugs & Pharmaceuticals Industry (1978), 13(3), 37-8
CODEN: IDPIA6; ISSN: 0019-4638
DOCUMENT TYPE: Journal
LANGUAGE: English
AB The **essential oil** from Leucas stelligera showed antibacterial activity against 8 of 10 tested bacteria and antifungal

activity against 5 of 10 tested fungi. Phys.-chem. properties are reported for the **essential oil**, which was obtained by steam distn. of dried leaves and flowers of the plant. The antimicrobial activity was detd. by an agar diffusion method with oil-soaked filter paper disks.

L27 ANSWER 34 OF 34 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1977:496715 HCAPLUS
DOCUMENT NUMBER: 87:96715
TITLE: Study of the antimycotic effects of biologically active components of Matricaria chamomilla L
AUTHOR(S): Szalontai, Marianne; Verzar-Petri, Gizella; Florian, Ede
CORPORATE SOURCE: Fac. Pharm., Semmelweis Med. Univ., Budapest, Hung.
SOURCE: Parfuemerie und Kosmetik (1977), 58(5), 121-7
CODEN: PAKOAL; ISSN: 0031-1952
DOCUMENT TYPE: Journal
LANGUAGE: German
GI



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AB The biol. active components of M. chamomilla, including total flavonoids, total **essential oils**, cyclic ethers, chamazulene [529-05-5], .alpha.-bisabolol (I) [515-69-5], and **umbelliferone** [93-35-6], exhibited varying degrees of fungistatic activity. I and the cyclic ethers had significant effects at only 100 .mu.g/mL, and I was fungicidal to Candida albicans following a 30-min exposure of the yeast to a 1000 .mu.g/mL concn.

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=> d stat que
L13          6790 SEA FILE=REGISTRY ABB=ON  PLU=ON  CADIDENE OR CAMPHENE OR
                  CAMPHOR OR CARENE OR CARYOPHYLLENE OR CARVONE OR CARVACROL OR
                  CARYOPHYLLENE OR CINNAMIC(W)ALDEHYDE OR CITRAL OR CITRONELLAL
                  OR CINEOL OR ANISOLE OR CARYOPHYLLENE OR CINEOLE OR CYMEME
L14        231798 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L13 OR CADIDENE OR CAMPHENE
                  OR CAMPHOR OR CARENE OR CARYOPHYLLENE OR CARVONE OR CARVACROL
                  OR CARYOPHYLLENE OR CINNAMIC(W)ALDEHYDE OR CITRAL OR CITRONELLA
                  L OR CINEOL OR ANISOLE OR CARYOPHYLLENE OR CINEOLE OR CYMEME
L15          7857 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L14 AND (REPEL? INSECTICIDE?
                  OR APHICIDE? OR ACARICIDE? OR ANTIBACTERIAL(W) AGENT OR
                  FUNGICIDE  OR NEMATOCIDE? OR PESTICIDE? OR TERMITICIDE?)
L16          1553 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L14 (L)(REPEL? INSECTICIDE?
                  OR APHICIDE? OR ACARICIDE? OR ANTIBACTERIAL(W) AGENT OR
                  FUNGICIDE  OR NEMATOCIDE? OR PESTICIDE? OR TERMITICIDE?)
L17           750 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L14(L)(LABIATAE OR  UMBELLIFER
                  A OR THYMBRA OR  SATUREJA OR ORIGANUM OR  CORYDOTHYMUS OR
                  PINPINELLA OR FOENICULUM OR SPICATA OR MAJORANA OR CAPITATUS
                  OR VULGARE OR SOLYMICUM OR SPYLEUM OR BILGERI OR MINUTIFLORUM
                  OR ACCATUM OR SRIACUM OR ONITES OR ANISUM)
L18           13 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L17 AND L16
L19          1261 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L14 AND (LABIATAE OR
                  UMBELLIFERA OR THYMBRA OR  SATUREJA OR ORIGANUM OR  CORYDOTHYMU
                  S OR PINPINELLA OR FOENICULUM OR SPICATA OR MAJORANA OR
                  CAPITATUS OR VULGARE OR SOLYMICUM OR SPYLEUM OR BILGERI OR
                  MINUTIFLORUM OR ACCATUM OR SRIACUM OR ONITES OR ANISUM)
L20          103 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L15 AND L19
L21           90 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L20 NOT L18
L22           30 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L21 AND PD=<OCTOBER 10, 1998
L24         9850 SEA FILE=HCAPLUS ABB=ON  PLU=ON  ?LABIAT? OR ?UMBELLIFER? OR
                  LAURUS OR MOBILIS
L25          608 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L24 AND ESSENTIAL OIL
L26           42 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L25 AND (REPEL? INSECTICIDE?
                  OR APHICIDE? OR ACARICIDE? OR ANTIBACTERIAL(W) AGENT OR
                  FUNGICIDE  OR NEMATOCIDE? OR PESTICIDE? OR TERMITICIDE?)
L27           34 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L26 NOT (L18 OR L22)
L30           80 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L24 AND ?EMULS?
L32           21 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L30 AND (REPEL? OR INSECTICIDE
                  ? OR APHICIDE? OR ACARICIDE? OR ANTIBACTERIAL(W) AGENT OR
                  FUNGICIDE  OR NEMATOCIDE? OR PESTICIDE? OR TERMITICIDE?)
L33           19 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L32 NOT (L18 OR L22 OR L27)


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L33  ANSWER 1 OF 19  HCAPLUS  COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER:        2002:837191  HCAPLUS
DOCUMENT NUMBER:         138:51334
TITLE:                   Pesticidal character of phytoecdysteroids from Ajuga
                         multiflora Bunge (Labiatae) on larvae of
                         Cryptorrhynchus lapathi L. (Coleoptera: Curculionidae)
AUTHOR(S):               Chi, De-fu; Sun, Ming-xue; Xia, Wen-fu
CORPORATE SOURCE:        College of Forest Resources and Environment, Northeast
                         Forestry University, Harbin, 150040, Taiwan
SOURCE:                  Journal of Forestry Research (English Edition) (2002),
                         13(3), 177-182
                         CODEN: JFREAT; ISSN: 1007-662X
PUBLISHER:               Journal of Forestry Research
DOCUMENT TYPE:           Journal
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LANGUAGE: English

AB Eight kinds of phytoecdysteroids extd. from different parts of Ajuga multiflora Bunge (**Labiatae**) that were collected from different places at different time were tested for killing effects on the 2-instar larvae of Cryptorhynchus lapathi by adding them to the artificial diet of larvae. The exptl. results indicated that adding 1-3-mL phytoecdysteroids to the artificial diet could lead 58%-100% of 2-instar larvae of C. lapathi to death within 24 days. The phytoecdysteroids extd. from the whole plant of A. multiflora which was collected before flowering time were much more effective than those extd. from the plants collected at flowering and after flowering periods, and the modified mortality rate of larvae reached 65.22%, 85.07%, and 98.11% at the dosage level of 1-mL, 2-mL, and 3-mL exts., resp. The ext. made from root of A. multiflora plant was more effective in killing efficiency than those from stem and leaves, and the av. death rates of larvae were up to 100%, 98.20% and 98.32% at dosage levels of 1-mL, 2-mL, and 3-mL exts., resp. The killing speed of the extd. phytoecdysteroids was slower than that of triflumuron, hexaflumuron or deltamethrin **emulsifiable** conc. The mortality rate of larvae is closely related to the feeding duration on the diets contg. phytoecdysteroids. Feeding on the diets with addn. of phytoecdysteroids for 16 days, more than 80% of treated 2-instar larvae of C. Iapathi were led to death. The killing effect of the exts. was little affected by the growth areas of A. multiflora plant and the adding way to artificial diet.

REFERENCE COUNT: 21 THERE ARE 21 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L33 ANSWER 2 OF 19 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 2002:695702 HCAPLUS

DOCUMENT NUMBER: 137:200621

TITLE: **Labiatae** herb extracts and hop extracts for extending the color life and inhibiting the growth of microorganisms in fresh meat, fish and poultry

INVENTOR(S): Reynhout, Gregory S.; Berdahl, Donald R.; Schulze, Mark H.

PATENT ASSIGNEE(S): Kalsec, Incorporated, USA

SOURCE: PCT Int. Appl., 58 pp.
CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2002069741	A1	20020912	WO 2001-US22532	20010713
W: AU, CA, MX, NZ, US				
RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR				
EP 1363510	A1	20031126	EP 2001-961658	20010713
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI, CY, TR				

PRIORITY APPLN. INFO.: US 2001-273185P P 20010302
WO 2001-US22532 W 20010713

AB **Labiate** herb ext. and a hop ext. contg. .beta.-acids are used to extend the color life and retard the growth of bacteria in fresh meat, fish and poultry stored in an atm. that contains .gtoreq.20% oxygen. Thus, ground beef supplemented with rosemary ext. (equiv. to 20 ppm carnosic acid in the beef) and hop ext. (equiv. to 194 ppm .beta.-acids in beef) showed a greatly enhanced storage life in a modified atm. (80% oxygen, 20% carbon dioxide).

REFERENCE COUNT: 8 THERE ARE 8 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L33 ANSWER 3 OF 19 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1997:654813 HCAPLUS
DOCUMENT NUMBER: 127:336470
TITLE: Antibacterial, low-irritation cosmetics
INVENTOR(S): Terai, Makoto
PATENT ASSIGNEE(S): Noevir K. K., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 14 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 09255518	A2	19970930	JP 1996-90484	19960319

PRIORITY APPLN. INFO.: JP 1996-90484 19960319
OTHER SOURCE(S): MARPAT 127:336470
AB Antibacterial, low-irritation cosmetics comprise N-long chain acyl basic amino acid derivs. and/or their acid addn. salts 0.001-0.5 and antibacterial plant exts. 0.01-20.0 wt.%. A lotion contained ethanol 7.0, 1,3-butylene glycol 6.0, glycerin 2.0, ethoxylated hardened castor oil 0.6, N-cocoyl-L-arginine Et ester DL-pyrrolidonecarboxylic acid salt 0.2, Arnica montana exts. 1.0, perfumes 0.06 and purified water to 100 wt.%. Plant exts. synergistically enhanced the antibacterial activity of N-long chain acyl basic amino acids derivs.

L33 ANSWER 4 OF 19 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1997:650176 HCAPLUS
DOCUMENT NUMBER: 127:336465
TITLE: Antibacterial, low-irritation cosmetics
INVENTOR(S): Terai, Makoto
PATENT ASSIGNEE(S): NOEVIR Co., Ltd., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 14 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 09255519	A2	19970930	JP 1996-90485	19960319

PRIORITY APPLN. INFO.: JP 1996-90485 19960319
AB Antibacterial, low-irritation cosmetics comprise polyhydric alcs. and/or their alkyl ethers .gtoreq. 5.0 and antibacterial plant exts. 0.01-20.0 wt.%. A lotion contained ethanol 7.0, 1,3-butylene glycol 6.0, glycerin 2.0, ethoxylated hardened castor oil 0.6, N-cocoyl-L-arginine Et ester DL-pyrrolidonecarboxylic acid salt 0.2, Arnica montana exts. 1.0, perfumes 0.08 and purified water to 100 wt.%. Plant exts. synergistically enhanced the antibacterial activity of polyhydric alcs. and/or their alkyl ethers.

L33 ANSWER 5 OF 19 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1996:58182 HCAPLUS
DOCUMENT NUMBER: 124:90184
TITLE: Making black dyed silk products darker with change in shade
INVENTOR(S): Onoda, Keizo; Fujisaki, Katsuhide
PATENT ASSIGNEE(S): Toei Kk, Japan; Fujisaki Senko Kk
SOURCE: Jpn. Kokai Tokkyo Koho, 7 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent

LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 07279066	A2	19951024	JP 1994-85754	19940329
JP 2516571	B2	19960724		

PRIORITY APPLN. INFO.: JP 1994-85754 19940329

AB The title process involves treating black silk dyed by direct dyes with an **emulsion** of oxidized polyethylene wax and **Labiatae** oil and an **emulsion** of perfluorocarbon-acrylate copolymer (e.g., Dicguard F90, Asahiguard AG-480)-based water- and oil-**repellent emulsion**. A dyed fabric of L value 14.02, a value +1.96, and b value +0.88 was obtained from L value 15.41, a value -0.06, and b value +0.14 before finishing.

L33 ANSWER 6 OF 19 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1971:124019 HCAPLUS
DOCUMENT NUMBER: 74:124019
TITLE: Action of some **pesticides** against Dynaspidiotus britanicus and its parasites
AUTHOR(S): Nikolaishvili, A. A.
CORPORATE SOURCE: USSR
SOURCE: Subtropicheskie Kul'tury (1970), (4), 174-5
CODEN: SUKUA8; ISSN: 0491-4031
DOCUMENT TYPE: Journal
LANGUAGE: Russian

AB The following **pesticides** were tested against the title pests of bay-trees (**Laurus** nobilis) in the lab. and on farms of Western Georgia; Sumithion, Nexion, carbophos, phosalone, and metathion. **Pesticide emulsions** were sprayed in 0.1, 0.2, or 0.3% concns. of the active ingredient. The effectiveness of the **pesticides** was detd. by counting on the 15th and 16th days after spraying the no. of killed insects and their parasites. Phosalone, metathion, and carbophos at 0.3% concn. killed 97-8% of the insect species. The degree of toxicity of each of these **emulsions** resembled nearly that of 0.3% B58 (control). Such a level of **insecticide** kill could not be achieved with lower concns. of these prepns., or with Nexion or Sumithion. Only a small no. of parasites of D. britanicus, mainly adult forms, were killed with the 0.3% methathion and Sumithion **emulsions**.

L33 ANSWER 7 OF 19 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1961:139558 HCAPLUS
DOCUMENT NUMBER: 55:139558
ORIGINAL REFERENCE NO.: 55:26350e-h
TITLE: Effectiveness of new **insecticides** against the harlequin cabbage bug on collards
AUTHOR(S): Hofmaster, R. N.
CORPORATE SOURCE: Virginia Truck Expt. Sta., Painter
SOURCE: Journal of Economic Entomology (1959), 52, 777-8
CODEN: JEENAI; ISSN: 0022-0493
DOCUMENT TYPE: Journal
LANGUAGE: Unavailable

AB Five expts. involving 21 **insecticides** and 49 different treatments were conducted against both nymphs and adults of Murgantia histrionica. All **insecticides** were tested as sprays in **emulsion** form except Dylox (O,O-di-Me 2,2,2-trichloro-1-hydroxyethylphosphonate) (sol. powder) and sabadilla (20% dust) and were applied to the Vates variety of collards at 0.25-5.0 lb. active compds./acre. Sevin (1-naphthyl N-methylcarbamate) and Thiodan (6,7,8,9,10,10-hexachloro - 1,5,5a,6,9,9a - hexahydro - 6,9 - methano

-2,4,3-benzodioxathiepin 3-oxide) gave 109% knockdown in 6 hrs. or less at 0.5 lb./acre. Trithion [S-(p-chlorophenylthio)methyl O,O-di-Et phosphorodithioate] and Dylox were slower in action but eventually gave excellent control. Statistical analysis showed that DDT, Perthane [1,1-dichloro-2,2-bis(p-ethylphenyl)ethane], 20% sabadilla, and Union Carbide Chemicals Compound 8305 (p-chloro-2,4-dioxa-5- methyl- p- thiono -3- phosphabicyclo[4.4.0] decane) were significantly less effective than the other compds. against adult harlequin bugs. Extensive feeding damage occurred in these treatments. Last instar nymphs were easier to control but the order of relative insecticidal effectiveness was the same. A combination of parathion and toxaphene gave better results than either chemical used separately.

L33 ANSWER 8 OF 19 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1961:127051 HCAPLUS
DOCUMENT NUMBER: 55:127051
ORIGINAL REFERENCE NO.: 55:23909a-c
TITLE: **Insecticides** for control of the winter tick
AUTHOR(S): Drummond, R. O.; Moore, Bobby; Warren, Jack
SOURCE: Journal of Economic Entomology (1959), 52, 1220-1
CODEN: JEENAI; ISSN: 0022-0493
DOCUMENT TYPE: Journal
LANGUAGE: Unavailable
AB Sprays of Delnav (p-dioxane-2,3-dithiol S,S-bis(O,O-di-Et phosphorodithioate)), Ronnel, Co-Ral [O-(3-chloro-4-**methylumbelliferone**) O,O-di-Et phosphorothioate], Bayer 22,408 (O,O-di-Et O-naphthalimidophosphorothioate), Sevin (1-naphthyl N-methylcarbamate), malathion, and toxaphene were applied to Hereford cattle to control Dermacentor albipictus. All the treatments reduced the tick population and 0.5% Co-Ral, as a wettable powder, gave the most effective control as compared with the standard toxaphene spray (at 0.5% from **emulsifiable** concentrate). Malathion gave the poorest control, failing to prevent reinfestation by adults emerging from nymphal skins.

L33 ANSWER 9 OF 19 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1961:107915 HCAPLUS
DOCUMENT NUMBER: 55:107915
ORIGINAL REFERENCE NO.: 55:20301g-i,20302a
TITLE: Relative efficacy of several materials for control of poultry ectoparasites
AUTHOR(S): Kraemer, Paul
CORPORATE SOURCE: Univ. of California, Berkeley
SOURCE: Journal of Economic Entomology (1959), 52, 1195-9
CODEN: JEENAI; ISSN: 0022-0493
DOCUMENT TYPE: Journal
LANGUAGE: Unavailable
AB Argas persicus was effectively controlled by a 1% **emulsion** of Sevin (1-naphthyl N-methylcarbamate) applied as a premise spray in conjunction with a 0.5% **emulsion** spray applied to the birds at the rate of 1 gal./100 birds. Promising but inconclusive results were obtained with Dibrom (O,O-dimethyl-O-(1,2-dibromo-2,2-dichloroethyl) phosphate) and Korlan (O,O-dimethyl O-(2,4,5-trichlorophenyl)phosphorothioate) sprays. A 1% Dylox (O,O-dimethyl 2,2,2-trichloro-1-hydroxyethylphosphonate) spray applied to premises and birds gave unsatisfactory control of the fowl tick. Menacanthus stramineus was effectively controlled with Dylox soln., 0.5%, spray, 1 gal./100 birds; Korlan **emulsion**, 0.1%, spray, 1 gal./100 birds, in conjunction with nest and litter spray; Sevin **emulsion**, 0.5% spray, 1 gal./100 birds; Sevin dust, 0.5%, 4 oz./100 birds. Promising but inconclusive results were obtained with 0.25% Korlan suspension spray. Ornithonyssus sylviarum was effectively controlled with sprays at 1 gal./100 birds: Co-Ral (O,O-diethyl O-(3-chloro-4-methyl-7-coumarinyl)

phosphorothioate) suspension, 0.1%; Dibrom **emulsion**, 0.25%; Korlan **emulsion**, 0.25%; Sevin **emulsion**, 0.25%; Sevin suspension, 0.5%. A 5% Sevin dust applied by puff duster at the rate of 4 oz./100 birds was also effective. Unsatisfactory control followed use of Tedion (2,4,4',5-tetrahclorodiphenyl sulfone, 80% tech.) suspension spray, 0.1%, 1 gal./100 birds; 3.6-4 oz./100 birds of 15%, Delphene (N,N-diethyl-m-toluamide) dust, 4% Dibrom dust, or 3% Tedion dust; 0.3 oz. of Santocel (a powdery silica aerogel) dust/100 birds; 1% suspension of Dowco 109 [O-(4-tert-butyl-2-chlorophenyl) O-methyl methylphosphoramidothioate].

L33 ANSWER 10 OF 19 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1961:101583 HCAPLUS
DOCUMENT NUMBER: 55:101583
ORIGINAL REFERENCE NO.: 55:19109i,19110a-b
TITLE: Studies with Bayer 21/199-P32 sprayed on cattle
AUTHOR(S): Robbins, William E.; Hopkins, Theodore L.; Darrow, Darrell I.; Eddy, Gaines W.
SOURCE: Journal of Economic Entomology (1959), 52, 214-17
CODEN: JEENAI; ISSN: 0022-0493
DOCUMENT TYPE: Journal
LANGUAGE: Unavailable
AB The metabolism, excretion, and tissue distribution of P32-labeled Bayer 21/199 were studied following spray application on 2 Hereford bulls. Only low levels of radioactive compds. were found in the blood, and these behaved like polar degradation products. The compd. was sparingly absorbed, about 2.4 (suspension) and 6.3% (**emulsion**) of the applied dose being accounted for in the urine of the 2 animals 2 weeks after treatment. At that time only very low levels of org.-sol. compds. which behaved like 21/199 were present in the tissues, but a considerable residue of unchanged 21/199 was present externally.

L33 ANSWER 11 OF 19 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1959:25253 HCAPLUS
DOCUMENT NUMBER: 53:25253
ORIGINAL REFERENCE NO.: 53:4641a-d
TITLE: Toxicity of lindane and other **acaricides** to the eggs of the mange mite Chorioptes bovis
AUTHOR(S): Sweatman, G. K.; Pullin, J. W.
CORPORATE SOURCE: Univ. Otago, Dunedin, N. Z.
SOURCE: Canadian Journal of Comparative Medicine and Veterinary Science (1958), 22, 409-15
CODEN: CNJMAQ; ISSN: 0316-5957
DOCUMENT TYPE: Journal
LANGUAGE: Unavailable
AB Mites for in vitro cultures were collected from 2 cows never exposed to any treatment; this precluded any resistance of the mites to an **acaricide**. The isolation unit consisted of a glass column, 5 cm. high, with bolting silk attached to the bottom edge. About 200 eggs were placed on the bolting silk; the **acaricide** to be tested was pipetted over the eggs, and the top of the glass tube was covered with bolting silk. The glass tube was then placed within a rubber tubing held by wire screening to the closely clipped hide of the cow. A total of 39 compds. formulated in accordance with manufacturers' recommendations as wettable powders or **emulsions** was tested. None was 100% lethal to the eggs of C. bovis in 1 exposure; the most effective compds. were (in this order) dieldrin (best), Trithion (or R-1303), Thiodan (or hexachlorendomethylene bicycloheptene bis(oxymethylene) sulfite), Korlan (or Dow ET-57), and lindane. All active mites of C. bovis were killed by 0.046% of lindane but 16% of the quiescent stages survived 1 exposure. The residual toxicity of lindane on the cow was about 9 days. Hence, a 10-day interval between treatments with lindane is appropriate. Poorest results were given by Bayer 21/199 and the chlorinated hydrocarbons

Dithane Z-78, Murvesco (or PCPBS), and the control. In general, **emulsions** were more effective than wettable powders.

L33 ANSWER 12 OF 19 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1958:57770 HCAPLUS
DOCUMENT NUMBER: 52:57770
ORIGINAL REFERENCE NO.: 52:10430e-g
TITLE: Acute toxicities of phosphorus **insecticides**, their isomers and intermediary products
AUTHOR(S): Marhold, Josef; Cizek, Jiri
CORPORATE SOURCE: Vyzk. ustav org. syntes, Pardubice-Rybitvi, Czech.
SOURCE: Pracovni Lekarstvi (1957), 9, 390-3
CODEN: PRLFAG; ISSN: 0032-6291
DOCUMENT TYPE: Journal
LANGUAGE: Unavailable
AB Inhalation tests with male Wistar rats exposed for 4 hrs. to aerosol concns. ranging from 0.10 to 2.20 mg./l. revealed the following relative toxicities: POCl3 1.0, PSCl3 1.4, MeOPSCl2 1.2, EtOPSCl2 0.9, (MeO)2PSCl 0.4, (EtO)2PSCl 1.3, (MeO)3PS 0.1, and (EtO)3PS 0.1. Relative oral toxicities detd. by applying the compds. in 0.1% **emulsion** with 0.186% Eryfor RL into the stomach and calcg. from the L.D.50 were as follows: parathion (I) 1.0, paraoxon 2.1, methylparathion 0.9, methylparaoxon 1.6, Potasan 0.4, methylpotasan 0.4, O,O-diethyl S-(p-nitrophenyl) thiophosphate 0.9, O,S-diethyl O-(p-nitrophenyl) thiophosphate 0.3, bisparathion 0.1, O,O-dimethyl S-(p-nitrophenyl) thiophosphate 0.1, bismethylparathion 0.02, and bispotasan 0.002. 4-**Methylumbelliferone** had practically no acute toxicity. L.D.50 of I was 5.387 mg./kg.

L33 ANSWER 13 OF 19 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1957:64078 HCAPLUS
DOCUMENT NUMBER: 51:64078
ORIGINAL REFERENCE NO.: 51:11647i,11648a-b
TITLE: **Insecticides**
INVENTOR(S): Schrader, Gerhard; Kukenthal, Hans
PATENT ASSIGNEE(S): Farbenfabriken Bayer A.-G.
DOCUMENT TYPE: Patent
LANGUAGE: Unavailable
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 833270		19520306	DE	

AB O,O-Dialkyl thiophosphoric esters of hydroxycoumarins dissolved or dispersed in suitable solvents or diluents or mixed with inert powd. substances are useful in combating plant pests, moths, bedbugs, Colorado potato beetles, cockroaches, etc. A wool fabric was impregnated with 0.25% of the O,O-dimethyl thiophosphoric ester (I) of 7-hydroxy-4-methylcoumarin in the form of an aq. **emulsion**, and dried in the open air. Moth larvae put on the impregnated fabric were killed within a few hrs. and bedbugs within 72 hrs. Talc. contg. 0.5% of the O,O-diethyl analog (II) of I sprayed on potato plants killed Colorado beetles and their larvae. The O,O-diethyl thiophosphoric ester of 7-hydroxycoumarin, or the O,O-dimethyl or O,O-diethyl thiophosphoric ester of 6-hydroxy-4-methylcoumarin can be used in the place of II.

L33 ANSWER 14 OF 19 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1957:10504 HCAPLUS
DOCUMENT NUMBER: 51:10504
ORIGINAL REFERENCE NO.: 51:2221c-d
TITLE: Laboratory comparison of eight organic phosphorus **insecticides** as larvicides against

nonresistant houseflies
AUTHOR(S): Lindquist, Donald A.; Fay, R. W.
CORPORATE SOURCE: U.S. Dept. of Health, Educ., and Welfare, Atlanta, GA
SOURCE: Journal of Economic Entomology (1956), 49, 463-5
CODEN: JEENAI; ISSN: 0022-0493
DOCUMENT TYPE: Journal
LANGUAGE: Unavailable
AB The order of decreasing effectiveness as surface applications of xylene **emulsions** to housefly larvae was Diazinon (I), EPN, parathion, Bayer 21/199, NPD, demeton, Bayer L 13/59, malathion. I at 5 mg./sq. ft. gave >90% mortality of small, medium, and large larvae. The compds. were more effective on small and medium-size larvae, and relatively ineffective against pupas.

L33 ANSWER 15 OF 19 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1956:92197 HCAPLUS
DOCUMENT NUMBER: 50:92197
ORIGINAL REFERENCE NO.: 50:17302c-e
TITLE: Control of the northern fowl mite and two species of lice on poultry
AUTHOR(S): Hoffman, Robert A.
SOURCE: Journal of Economic Entomology (1956), 49, 347-9
CODEN: JEENAI; ISSN: 0022-0493
DOCUMENT TYPE: Journal
LANGUAGE: Unavailable
AB Northern fowl mite (Bdellonyssus sylviarum) on white Leghorn hens was controlled by dusting with 1% lindane and 5% lauseto neu, Bayer 21/199, Bayer L 13/59 (I), Am. Cyanamid 4124, Chlorthion (II), and malathion (III); DDT was ineffective at 5%. I, II, and III also gave good control as 2.5% dusts. Dusts contg. at least 0.5% III gave complete control of chicken body louse (Menacanthus stramineus) and the shaft louse (Menopon gallinae) on caged birds. III as an **emulsion** spray at 0.25-0.5% gave good control of the fowl mite in field tests. Litter treatments of III dusts for mite control were 80-100% effective initially when 1 lb. of 4% dust was applied to floor areas of 40-200 sq. ft., but its residual effectiveness was erratic. Lindane and III as 1 and 4% dusts, resp., were completely effective against lice when applied at 1 lb./150 sq. ft.; II as a 4% dust was slightly less effective, and DDT gave only partial control at 1 lb./75 sq. ft.

L33 ANSWER 16 OF 19 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1956:37781 HCAPLUS
DOCUMENT NUMBER: 50:37781
ORIGINAL REFERENCE NO.: 50:7377d-e
TITLE: Control of potato aphid on tomatoes
AUTHOR(S): Taschenberg, E. F.; Avens, A. W.
CORPORATE SOURCE: New York State Agr. Expt. Sta., Geneva
SOURCE: Journal of Economic Entomology (1955), 48, 685-8
CODEN: JEENAI; ISSN: 0022-0493
DOCUMENT TYPE: Journal
LANGUAGE: Unavailable
AB Systox, at the rate of 1 oz./100 gal., was the most effective **aphicide** tested. Parathion, parathion + Bordeaux mixt., malathion, EPN, NPD, and Metacide gave good control of Macrosiphum solanifolii; Potasan was moderately effective. Wettable powders and **emulsifiable** concentrates were tested. The residues of malathion and parathion on green fruit decreased rapidly; after 48 hrs., there was an 87% reduction for malathion and 70% for parathion.

L33 ANSWER 17 OF 19 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1956:37769 HCAPLUS
DOCUMENT NUMBER: 50:37769
ORIGINAL REFERENCE NO.: 50:7375h-i,7376a

TITLE: Larvicides for control of the housefly
AUTHOR(S): Standifer, L. N.
CORPORATE SOURCE: Cornell Univ., Ithaca, NY
SOURCE: Journal of Economic Entomology (1955), 48, 731-3
CODEN: JEENAI; ISSN: 0022-0493
DOCUMENT TYPE: Journal
LANGUAGE: Unavailable
AB The L.D.50 and L.D.95 (in p.p.m. of rearing media) for various **insecticides** for 3rd instar larvae of the housefly are, resp.; aldrin (23% **emulsion**) 0.90, 3.61; Bayer 21/199 (10% **emulsion**) 4.66, 19.05; Bayer 21/199 (50% WP) 8.38, 46.41; Bayer L 13/59 (10% miscible) 3.39, 15.32; Bayer L 13/59 (tech. WS powder) 2.67, 11.28; BHC (25% **emulsion** from 35% .gamma. isomer) 50.90, 210.40; BHC (30% WP from 6% .gamma. isomer) 121.90, 298.90; dieldrin (18.5% **emulsion**) 1.18, 3.20; Diazinon (25% **emulsion**) 0.98, 5.31; endrin (18.5% **emulsion**) 4.73, 12.49; EPN-300 (25% WP) 0.92, 2.06; lindane (20% **emulsion**) 11.55, 46.16; lindane (2% WP) 14.80, 44.62; malathion (57% **emulsion**) 4.83, 14.11; malathion (25% WP) 8.65, 28.78; and parathion (1% WP) 1.21, 2.27. Chlordan, Dilan, heptachlor, and toxaphene were eliminated in early screening tests because of their low order of toxicity.

L33 ANSWER 18 OF 19 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1955:25399 HCAPLUS
DOCUMENT NUMBER: 49:25399
ORIGINAL REFERENCE NO.: 49:4925i,4926a-b
TITLE: The toxicity of phosphoric acid esters to anopheline larvae
AUTHOR(S): Keller, J. C.; Chapman, H. C.
SOURCE: Journal of Economic Entomology (1954), 47, 628-30
CODEN: JEENAI; ISSN: 0022-0493
DOCUMENT TYPE: Journal
LANGUAGE: Unavailable
AB cf. C.A. 48, 10986d. Of 274 phosphoric acid esters tested in the lab. against larvae of Anopheles quadrimaculatus only 14 compds. showed sufficient promise to warrant field testing. In the lab. acetone solns. of the toxicants were introduced into distd. water at concns. of 0.1 to 0.0005 p.p.m. of the toxicant. Sulfotepp, parathion, and EPN were very effective and only slightly more effective than methyl parathion. DDT was less toxic than these materials but was at least equal to the other P compds. Malathion, Diazinon, and paraoxon were of intermediate toxicity and Potasan, O,O-diethyl O-piperonyl thiophosphate, and NPD were the least toxic. In field tests against larvae of A. crucians and A. quadrimaculatus the **insecticides** were applied in **emulsions** at dosages from 0.25-0.001 lb./acre. EPN, O-(3-chloro-4-**methylumbelliferone**) O,O-dimethyl thiophosphate, parathion, and DDT were the most effective materials. Sulfotepp, malathion, and Potasan showed the least promise.

L33 ANSWER 19 OF 19 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1950:28490 HCAPLUS
DOCUMENT NUMBER: 44:28490
ORIGINAL REFERENCE NO.: 44:5552a-b
TITLE: Insect **repellent** and sun-protecting cosmetic preparations
PATENT ASSIGNEE(S): Gebruder Schnyder & Co., A.G.
DOCUMENT TYPE: Patent
LANGUAGE: Unavailable
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE

CH 257578 19490401 CH

AB Cosmetic prepns. are disclosed contg. insect **repellents**, such as esters of dicarboxylic acids, as from 2-ethyl-1,3-hexanediol, 2-phenylcyclohexanol, and 2-cyclohexylcyclohexanol and ultraviolet absorbing chemicals, such as esculin, **umbelliferone**, anthranilic or salicylic acid derivs., etc. Thus, an **emulsion** is made from glyceryl monostearate 5, o-H2NC6H4CO2Me 3, C4H8(CO2Et)2 10, water 81.5, and perfume and antioxidant 0.5 parts.

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=> d stat que
L4          1134 SEA FILE=REGISTRY ABB=ON  PLU=ON  SABINENE  OR ANETHOLE OR
                 CITRAL OR  CADINENE OR MENTH(2W)2(2W)EN(2W)1(2W)OL OR ANISALDEH
                 YDE OR METHOXYPHENYLACETONE CARYOPHYLLENE
L13         6790 SEA FILE=REGISTRY ABB=ON  PLU=ON  CADIDENE OR CAMPHENE OR
                 CAMPHOR OR CARENE OR CARYOPHYLLENE OR CARVONE OR CARVACROL OR
                 CARYOPHYLLENE OR CINNAMIC(W)ALDEHYDE OR CITRAL OR CITRONELLAL
                 OR CINEOL OR ANISOLE OR CARYOPHYLLENE OR CINEOLE OR CYMEME
L14       231798 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L13 OR CADIDENE OR CAMPHENE
                 OR CAMPHOR OR CARENE OR CARYOPHYLLENE OR CARVONE OR CARVACROL
                 OR CARYOPHYLLENE OR CINNAMIC(W)ALDEHYDE OR CITRAL OR CITRONELLA
                 L OR CINEOL OR ANISOLE OR CARYOPHYLLENE OR CINEOLE OR CYMEME
L15         7857 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L14 AND (REPEL? INSECTICIDE?
                 OR APHICIDE? OR ACARICIDE? OR ANTIBACTERIAL(W) AGENT OR
                 FUNGICIDE  OR NEMATOCIDE? OR PESTICIDE? OR TERMITICIDE?)
L16         1553 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L14 (L)(REPEL? INSECTICIDE?
                 OR APHICIDE? OR ACARICIDE? OR ANTIBACTERIAL(W) AGENT OR
                 FUNGICIDE  OR NEMATOCIDE? OR PESTICIDE? OR TERMITICIDE?)
L17          750 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L14(L)(LABIATAE OR  UMBELLIFER
                 A OR THYMBRA OR  SATUREJA OR ORIGANUM OR  CORYDOTHYMUS OR
                 PINPINELLA OR FOENICULUM OR SPICATA OR MAJORANA OR CAPITATUS
                 OR VULGARE OR SOLYMICUM OR SPYLEUM OR BILGERI OR MINUTIFLORUM
                 OR ACCATUM OR SRIACUM OR ONITES OR ANISUM)
L18           13 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L17 AND L16
L19         1261 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L14 AND (LABIATAE OR
                 UMBELLIFERA OR THYMBRA OR  SATUREJA OR ORIGANUM OR  CORYDOTHYMU
                 S OR PINPINELLA OR FOENICULUM OR SPICATA OR MAJORANA OR
                 CAPITATUS OR VULGARE OR SOLYMICUM OR SPYLEUM OR BILGERI OR
                 MINUTIFLORUM OR ACCATUM OR SRIACUM OR ONITES OR ANISUM)
L20          103 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L15 AND L19
L21           90 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L20 NOT L18
L22           30 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L21 AND PD=<OCTOBER 10, 1998
L24         9850 SEA FILE=HCAPLUS ABB=ON  PLU=ON  ?LABIAT? OR ?UMBELLIFER? OR
                 LAURUS OR MOBILIS
L25          608 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L24 AND ESSENTIAL OIL
L26           42 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L25 AND (REPEL? INSECTICIDE?
                 OR APHICIDE? OR ACARICIDE? OR ANTIBACTERIAL(W) AGENT OR
                 FUNGICIDE  OR NEMATOCIDE? OR PESTICIDE? OR TERMITICIDE?)
L27           34 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L26 NOT (L18 OR L22)
L30           80 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L24 AND ?EMULS?
L32           21 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L30 AND (REPEL? OR INSECTICIDE
                 ? OR APHICIDE? OR ACARICIDE? OR ANTIBACTERIAL(W) AGENT OR
                 FUNGICIDE  OR NEMATOCIDE? OR PESTICIDE? OR TERMITICIDE?)
L33           19 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L32 NOT (L18 OR L22 OR L27)
L34         2283 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L4 AND (REPEL? OR INSECTICIDE?
                  OR APHICIDE? OR ACARICIDE? OR ANTIBACTERIAL(W) AGENT OR
                 FUNGICIDE  OR NEMATOCIDE? OR PESTICIDE? OR TERMITICIDE?)
L35           24 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L34 AND L17
L36           16 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L35 NOT (L18 OR L22 OR L27 OR
                 L33)


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L36  ANSWER 1 OF 16  HCAPLUS  COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER:         2003:873739  HCAPLUS
DOCUMENT NUMBER:          140:222848
TITLE:                    Chemical composition and antifungal activity of the
                          essential oil of Origanum virens on Candida species
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AUTHOR(S): Salgueiro, L. R.; Cavaleiro, C.; Pinto, E.; Pina-vaz, C.; Rodrigues, A. G.; Palmeira, A.; Tavares, C.; Costa-de-oliveira, S.; Goncalves, M. J.; Martinez-de-oliveira, J.
CORPORATE SOURCE: Lab. de Farmacognosia, Fac. de Farmacia/CEF, Universidade de Coimbra, Coimbra, Port.
SOURCE: Planta Medica (2003), 69(9), 871-874
CODEN: PLMEAA; ISSN: 0032-0943
PUBLISHER: Georg Thieme Verlag
DOCUMENT TYPE: Journal
LANGUAGE: English

AB The compn. and the antifungal activity of the essential oil of **Origanum** virens on Candida species were studied. The essential oil was obtained from the aerial parts of the plant by hydrodistn. and analyzed by GC and GC-MS. The oil was characterized by its high content of **carvacrol** (68.1%) and its biogenetic precursors, .gamma.-terpinene (9.9%) and p-cymene (4.5%). The minimal inhibitory concn. (MIC) and the minimal lethal concn. (MLC) were used to evaluate the antifungal activity against Candida strains (7 clin. isolates and 3 ATCC type strains). The inhibition of germ tube formation and flow cytometry, using the fluorescent probe propidium iodide (PI), were used to evaluate their mechanisms of action. MIC and MLC values were similar for most tested strains, ranging from 0.16 to 0.32 .mu.L/mL. Concns. lower than MIC values strongly prevent germ tube formation. The fungicidal effect is primarily due to an extensive lesion of the membrane.

IT **79-92-5, Camphene 87-44-5**, trans-**Caryophyllene 89-83-8**, Thymol **483-76-1**, .delta.-Cadinene **499-75-2, Carvacrol 1139-30-6**, **Caryophyllene** oxide **3387-41-5**, Sabinene **6753-98-6**, .alpha.-Humulene **13466-78-9** **15537-55-0**, cis-Sabinene hydrate **29803-81-4**, cis-p-Menth-2-en-1-ol **29803-82-5**, trans-p-Menth-2-en-1-ol
RL: NPO (Natural product occurrence); BIOL (Biological study); OCCU (Occurrence)
(compn. and antifungal activity of the essential oil of **Origanum** virens on Candida species)

REFERENCE COUNT: 16 THERE ARE 16 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L36 ANSWER 2 OF 16 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 2003:430292 HCAPLUS
DOCUMENT NUMBER: 139:234990
TITLE: Essential oil composition and antifungal activity of Foeniculum vulgare mill. Obtained by different distillation conditions
AUTHOR(S): Mimica-Dukic, N.; Kujundzic, S.; Sokovic, M.; Couladis, M.
CORPORATE SOURCE: Institute of Chemistry, Faculty of Natural Sciences, University of Novi Sad, Novi Sad, 21000, Yugoslavia
SOURCE: Phytotherapy Research (2003), 17(4), 368-371
CODEN: PHYREH; ISSN: 0951-418X
PUBLISHER: John Wiley & Sons Ltd.
DOCUMENT TYPE: Journal
LANGUAGE: English

AB The influence of different hydrodistn. conditions was evaluated from the standpoint of essential oil yield, chem. compn. and antifungal activity from seeds of Foeniculum vulgare Mill. Three hydrodistn. conditions were considered. The main constituents of the oils were: (E)-anethole (72.27%-74.18%), fenchone (11.32%-16.35%) and Me chavicol (3.78%-5.29%). The method of distn. significantly effected the essential oil yield and quant. compn., although the antifungal activity of the oils against some fungi was only slightly altered.

IT **76-22-2, Camphor 1195-79-5**, Fenchone

4180-23-8, trans-Anethole **25679-28-1**, cis-Anethole
RL: BSU (Biological study, unclassified); NPO (Natural product occurrence); BIOL (Biological study); OCCU (Occurrence)
(essential oil compn. and antifungal activity of **Foeniculum vulgare**)

IT **79-92-5**, **Camphene** **99-49-0**, **Carvone**
123-11-5, p-Anisaldehyde, biological studies **140-67-0**, Methyl chavicol **3387-41-5**, Sabinene **13466-78-9**
15537-55-0, Cis-Sabinene hydrate **17699-16-0**, Trans-Sabinene hydrate
RL: NPO (Natural product occurrence); BIOL (Biological study); OCCU (Occurrence)
(essential oil compn. and antifungal activity of **Foeniculum vulgare**)

REFERENCE COUNT: 11 THERE ARE 11 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L36 ANSWER 3 OF 16 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 2003:403810 HCAPLUS
DOCUMENT NUMBER: 139:114422
TITLE: In Vitro Antibacterial, Antifungal, and Antioxidant Activities of the Essential Oil and Methanol Extracts of Herbal Parts and Callus Cultures of Satureja hortensis L.
AUTHOR(S): Guelluece, M.; Soekmen, M.; Daferera, D.; Agar, G.; Oezkan, H.; Kartal, N.; Polissiou, M.; Soekmen, A.; Sahin, F.
CORPORATE SOURCE: Department of Biology, Faculty of Art and Scienc, Ataturk University, Erzurum, 25240, Turk.
SOURCE: Journal of Agricultural and Food Chemistry (2003), 51(14), 3958-3965
CODEN: JAFCAU; ISSN: 0021-8561
PUBLISHER: American Chemical Society
DOCUMENT TYPE: Journal
LANGUAGE: English

AB The present study was designated to evaluate the antimicrobial and antioxidant activities of the essential oil, obtained by using a Clevenger distn. app., water sol. (polar) and water insol. (nonpolar) subfractions of the methanol exts. from aerial parts of **Satureja** hortensis L. plants, and methanol ext. from calli established from the seeds using Gamborg's B5 basal media supplemented with indole-3-butyric acid (1.0 ppm), 6-benzylaminopurine (N6-benzyladenine) (1.0 ppm), and sucrose (2.5%). The antimicrobial test results showed that the essential oil of S. hortensis had great potential antimicrobial activities against all 23 bacteria and 15 fungi and yeast species tested. In contrast, the methanol ext. from callus cultures and water sol. subfraction of the methanol ext. did not show antimicrobial activities, but the nonpolar subfraction had antibacterial activity against only five out of 23 bacterial species, which were Bacillus subtilis, Enterococcus fecalis, Pseudomonas aeruginosa, Salmonella enteritidis, and Streptococcus pyogenes. Antioxidant studies suggested that the polar subfractions of the methanol ext. of intact plant and methanol ext. of callus cultures were able to reduce the stable free radical 2,2-diphenyl-1-picrylhydrazyl to the yellow-colored diphenylpicrylhydrazine. In this assay, the strongest effect was obsd. for the tissue culture ext., with an IC50 value of 23.76 .+-. 0.80 .mu.g/mL, which could be compared with the synthetic antioxidant agent butylated hydroxytoluene. On the other hand, linoleic acid oxidn. was 95% inhibited in the presence of the essential oil while the inhibition was 90% with the chloroform subfraction of the intact plant. The chem. compn. of a hydrodistd. essential oil of S. hortensis was analyzed by gas chromatog. (GC)/flame ionization detection (FID) and a GC-mass spectrometry system. A total 22 constituents representing 99.9% of the essential oil were identified by GC-FID anal. Thymol (29.0%),

carvacrol (26.5%), .gamma.-terpinene (22.6%), and p-cymene (9.3%) were the main components.

IT **87-44-5, Caryophyllene 89-83-8**, Thymol **104-46-1**, Anethole **499-75-2, Carvacrol 6380-28-5, Carvacrol** acetate
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(antibacterial, antifungal, and antioxidant activities of essential oil and exts. of **Satureja** hortensis callus culture)

REFERENCE COUNT: 51 THERE ARE 51 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L36 ANSWER 4 OF 16 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 2003:320834 HCAPLUS
DOCUMENT NUMBER: 139:90030
TITLE: Composition and antibacterial activity of the essential oil of Satureja parnassica subsp. parnassica
AUTHOR(S): Tzakou, Olga; Skaltsa, Helen
CORPORATE SOURCE: Department of Pharmacognosy and Chemistry of Natural Products, School of Pharmacy, University of Athens, Athens, 15771, Greece
SOURCE: Planta Medica (2003), 69(3), 282-284
CODEN: PLMEAA; ISSN: 0032-0943
PUBLISHER: Georg Thieme Verlag
DOCUMENT TYPE: Journal
LANGUAGE: English

AB The essential oils of **Satureja** parnassica subsp. parnassica (samples A and B), were analyzed by means of GC/MS. From the fifty-seven identified constituents representing 98.5% and 99.35% of the oils resp., (E)-**caryophyllene, carvacrol** and **caryophyllene** oxide were the major components of sample A (flowering stage), whereas in sample B (vegetative stage) major components were spathulenol, p-cymene and linalool. The oils were tested against Helicobacter pylori (HP), as well as against six aerobically growing bacteria. Both samples showed a moderate activity against Gram-pos. bacteria; sample A oil showed greater anti-HP activity than sample B.

IT **76-22-2, Camphor 79-92-5, Camphene 87-44-5**, (E)-**Caryophyllene 89-83-8**, Thymol **106-26-3**, Neral **118-65-0**, cis-**Caryophyllene 470-82-6**, 1,8-**Cineole 483-76-1**, .delta.-Cadinene **499-75-2, Carvacrol 1139-30-6, Caryophyllene** oxide **3792-53-8**, cis-Dihydrocarvone **6753-98-6**, .alpha.-Humulene **10208-80-7**, .alpha.-Muurolene **15537-55-0**, cis-Sabinene hydrate **24406-05-1**, .alpha.-Cadinene **39029-41-9**, .gamma.-Cadinene **244226-09-3**, 14-Hydroxy-9-epi-(E)-**caryophyllene**
RL: NPO (Natural product occurrence); BIOL (Biological study); OCCU (Occurrence)
(compn. and antibacterial activity of **Satureja** parnassica parnassica essential oil)

REFERENCE COUNT: 8 THERE ARE 8 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L36 ANSWER 5 OF 16 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 2003:54400 HCAPLUS
DOCUMENT NUMBER: 138:218127
TITLE: Chemical composition, antibacterial and antifungal activities of essential oils from Satureja calamintha and Satureja alpina of Morocco
AUTHOR(S): Satrani, Badr; Farah, Abdellah; Fechtal, Mohamed; Talbi, Mohamed; Blaghen, Mohamed; Chaouch, Abdelaziz
CORPORATE SOURCE: Centre National de la Recherche Forestiere, Rabat Agdal, 10 050, Morocco

SOURCE: Annales des Falsifications de l'Expertise Chimique et Toxicologique (2001), 94(956), 241-250
CODEN: AFETDF; ISSN: 0242-6110
PUBLISHER: Societe des Experts-Chimistes de France
DOCUMENT TYPE: Journal
LANGUAGE: French

AB The aim of this work is to study the chem. compn. and the antifungal and antibacterial activity of essential oils of **Satureja** calamintha and **Satureja** alpina of Morocco. **Satureja** calamintha samples provide the highest content of essential oil, 1.60% against 1.24% for those of **Satureja** alpina. Essential oils of **Satureja** calamintha are characterized by the presence of p-cymene (20,9%), .gamma.-terpinene (18,7%) and thymol (34,9%) as principal chem. components. Essential oils of **Satureja** alpina are mostly formed by limonene (11.9%), isomenthone (7.3%), neomenthol (6.5%), pulegone (25.1%), **carvone** (18%) and thymol acetate (15.3%). Essential oils of **Satureja** calamintha at given concns. are more active and inhibit all the microorganisms tested. With essential oils of **Satureja** alpina, Bacillus subtilis and Escherichia coli are inhibited resp. at 1/1000 and 1/500 V/V concns., whereas Staphylococcus aureus is not inhibited at .gtoreq. 1/250 V/V concn. In fungi, only Penicillium parasiticus revealed certain resistance to inhibition with essential oils of this species until 1/500 V/V concn. Trametes pini and Aspergillus niger are inhibited at the lowest concn. (1/1000 V/V). The greater activity of essential oils of **Satureja** calamintha compared to that of **Satureja** alpina is due mainly to the presence of thymol, **carvacrol** and .alpha.-terpineol, which are known for their effectiveness against the microbial agents.

IT **79-92-5, Camphene 87-44-5 89-83-8,** Thymol **97-53-0,** Eugenol **99-49-0, Carvone 470-82-6,** 1,8 **Cineole 489-86-1,** Guaiol **499-75-2, Carvacrol 554-61-0 3387-41-5**, Sabinene **10208-80-7,** .alpha. Muurolene **13466-78-9 15537-55-0**
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(chem. compn. and antibacterial and antifungal activities of essential oils from **Satureja** calamintha and S. alpina of Morocco)

REFERENCE COUNT: 31 THERE ARE 31 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L36 ANSWER 6 OF 16 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 2002:720111 HCAPLUS
DOCUMENT NUMBER: 138:3798
TITLE: Effect of Phosphorus Concentration of the Nutrient Solution on the Volatile Constituents of Leaves and Bracts of Origanum dictamnus
AUTHOR(S): Economakis, C.; Skaltsa, Helen; Demetzos, Costas; Sokovic, M.; Thanos, Costas A.
CORPORATE SOURCE: Subtropical Plants and Olive Trees Institute, National Agricultural Research Foundation, Chania, Greece
SOURCE: Journal of Agricultural and Food Chemistry (2002), 50(22), 6276-6280
CODEN: JAFCAU; ISSN: 0021-8561
PUBLISHER: American Chemical Society
DOCUMENT TYPE: Journal
LANGUAGE: English

AB The chem. compn. of the essential oils obtained from the leaves and bracts of hydroponically cultivated O. dictamnus were analyzed by GC-MS techniques. Three different concns. of phosphorus (5, 30, and 60 mg/L) in the nutrient soln. were used for the cultivation, using the nutrient film technique (NFT). A total of 46 different compds. were identified and significant differences (qual. and quant.) were obsd. between the samples. Carvacrol and p-cymene were identified as the main compds. in all samples

analyzed, whereas thymoquinone was found in higher percentage in the leaves than in bracts. The essential oils were tested for their antibacterial activity against Gram-pos. and Gram-neg. bacteria. The oils obtained from the bracts were more active. The results obtained from GC-MS analyses were submitted to chemometric anal.

IT **79-92-5, Camphene 87-44-5**, .beta.-**Caryophyllene 89-83-8**, Thymol **483-76-1**, .delta.-Cadinene **499-75-2, Carvacrol 1139-30-6**, **Caryophyllene** oxide **3792-53-8**, cis-Dihydrocarvone **6753-98-6**, .alpha.-Humulene **13466-78-9 15537-55-0**, cis-Sabinene hydrate **17699-16-0**, trans-Sabinene hydrate **39029-41-9**, .gamma.-Cadinene
RL: ANT (Analyte); BSU (Biological study, unclassified); ANST (Analytical study); BIOL (Biological study)
(effect of phosphorus concn. of nutrient soln. on volatile constituents of leaves and bracts of **Origanum** dictamnus)

REFERENCE COUNT: 24 THERE ARE 24 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L36 ANSWER 7 OF 16 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 2001:849630 HCAPLUS
DOCUMENT NUMBER: 136:131542
TITLE: Composition and antibacterial activity of the essential oils from Satureja wiedemanniana (Lallem.) Velen
AUTHOR(S): Baser, Kemal Husnu Can; Tumen, Gulendam; Tabanca, Nurhayat; Demirci, Fatih
CORPORATE SOURCE: Medicinal and Aromatic Plant and Drug Research Centre (TBAM), Anadolu University, Eskisehir, 26470, Turk.
SOURCE: Zeitschrift fuer Naturforschung, C: Journal of Biosciences (2001), 56(9/10), 731-738
CODEN: ZNCBDA; ISSN: 0939-5075
PUBLISHER: Verlag der Zeitschrift fuer Naturforschung
DOCUMENT TYPE: Journal
LANGUAGE: English

AB **Satureja** wiedemanniana (Lallem.) Velen (Lamiaceae) is an endemic species of Turkey. Aerial parts of the plant collected from eleven different localities in Turkey were subjected to hydrodistn. to yield essential oils which were analyzed by a GC/MS system. **Carvacrol**, thymol, p-cymene and .gamma.-terpinene were found as the main constituents. Antibacterial evaluation of the oils was also carried out.

IT **76-22-2, Camphor 79-92-5, Camphene 87-44-5**, .beta.-**Caryophyllene 89-83-8**, Thymol **91-20-3**, Naphthalene, biological studies **97-53-0**, Eugenol **99-49-0, Carvone 106-26-3**, Neral **141-27-5**, Geranial **470-82-6**, 1,8-**Cineole 483-76-1**, .delta.-Cadinene **499-75-2, Carvacrol 1076-56-8**, Thymol methyl ether **1139-30-6**, **Caryophyllene** oxide **1740-97-2**, 4-Isopropyl-2-methyl phenol **3387-41-5**, Sabinene **3792-53-8 5948-04-9**, trans-Dihydrocarvone **6379-73-3, Carvacrol** methyl ether **6380-28-5**, Carvacryl acetate **6753-98-6**, .alpha.-Humulene **10208-80-7**, .alpha.-Muurolene **13466-78-9 15537-55-0**, cis-Sabinene hydrate **17627-43-9**, Isocaryophyllene oxide **17699-16-0**, trans-Sabinenehydrate **23445-02-5**, Cubebol **29803-81-4**, cis-p-Menth-2-en-1-ol **29803-82-5**, trans-p-Menth-2-en-1-ol **30460-92-5**, Pinocarvone **39029-41-9**, .gamma.-Cadinene **90131-02-5**, Sesquicineole **92760-25-3**, Dehydro-1,8-**cineole**
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(compn. and antibacterial activity of essential oils from **Satureja** wiedemanniana)

REFERENCE COUNT: 31 THERE ARE 31 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L36 ANSWER 8 OF 16 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 2001:659333 HCAPLUS
DOCUMENT NUMBER: 135:329143
TITLE: Antibacterial screening of Origanum majorana oil from Tunisia
AUTHOR(S): Ben Hamida-Ben Ezzeddine, N.; Abdelkefi, M. M.; Ben Aissa, R.; Chaabouni, M. M.
CORPORATE SOURCE: Laboratoire de chimie Structurale Organique, Departement de Chimie, Faculte des Sciences de Tunis, Tunis, 1060, Tunisia
SOURCE: Journal of Essential Oil Research (2001), 13(4), 295-297
CODEN: JEOREG; ISSN: 1041-2905
PUBLISHER: Allured Publishing Corp.
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Two methods (agar diffusion and broth microdilution) were used to assess the antibacterial activity of Origanum majorana oil of Tunisian origin against 10 bacteria. The results showed that this oil was active against all of the tested strains. The most susceptible were Escherichia coli, Streptococcus A, Shigella dysenteria and Salmonella enteritidis. The least susceptible one was Pseudomonas aeruginosa.
IT **87-44-5**, .beta.-**Caryophyllene** **89-83-8**, Thymol **499-75-2**, **Carvacrol** **1139-30-6**, **Caryophyllene** oxide **3387-41-5**, Sabinene **15537-55-0**, cis-Sabinene hydrate **17699-16-0**, trans-Sabinene hydrate **29803-81-4**, cis-p-Menth-2-en-1-ol **29803-82-5**, trans-p-Menth-2-en-1-ol
RL: BOC (Biological occurrence); BSU (Biological study, unclassified); BIOL (Biological study); OCCU (Occurrence)
(chem. compn. and antibacterial activity of **Origanum majorana** oil from Tunisia)
REFERENCE COUNT: 15 THERE ARE 15 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L36 ANSWER 9 OF 16 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 2001:619594 HCAPLUS
DOCUMENT NUMBER: 135:315922
TITLE: Composition and antimicrobial activity of the essential oils of two Origanum species
AUTHOR(S): Aligiannis, N.; Kalpoutzakis, E.; Mitaku, Sofia; Chinou, Ioanna B.
CORPORATE SOURCE: Department of Pharmacognosy School of Pharmacy, University of Athens, Athens, 157 71, Greece
SOURCE: Journal of Agricultural and Food Chemistry (2001), 49(9), 4168-4170
CODEN: JAFCAU; ISSN: 0021-8561
PUBLISHER: American Chemical Society
DOCUMENT TYPE: Journal
LANGUAGE: English
AB The essential oils obtained from the aerial parts of **Origanum** scabrum and Origaum microphyllum, both endemic species in Greece, were analyzed by means of GC and GC-MS. Forty-eight constituents were identified, representing 98.59 and 98.66% of the oils, resp. **Carvacrol**, terpinen-4-ol, linalool, sabinene, .alpha.-terpinene, and .gamma.-terpinene were found as the major components. Furthermore, both samples exhibited a very interesting antimicrobial profile after they were tested against six Gram-neg. and -pos. bacteria and three pathogenic fungi.
IT **499-75-2**, **Carvacrol**

RL: BAC (Biological activity or effector, except adverse); BOC (Biological occurrence); BSU (Biological study, unclassified); BIOL (Biological study); OCCU (Occurrence)
(compn. and antimicrobial activity of essential oils of **Origanum** scabrum and O. microphyllum)

IT **79-92-5, Camphene 87-44-5**, .beta.-**Caryophyllene 89-83-8**, Thymol **140-67-0**, Estragol **619-62-5**, p-Menth-2-en-1-ol **1076-56-8**, Thymol, methyl ether **1139-30-6**, **Caryophyllene** oxide **3387-41-5**, Sabinene **5948-04-9**, trans-Dihydrocarvone **6379-73-3**, **Carvacrol**, methyl ether **6753-98-6**, .alpha.-Humulene **13466-78-9 15537-55-0**, cis-Sabinene hydrate
RL: BOC (Biological occurrence); BSU (Biological study, unclassified); BIOL (Biological study); OCCU (Occurrence)
(compn. and antimicrobial activity of essential oils of **Origanum** scabrum and O. microphyllum)

REFERENCE COUNT: 15 THERE ARE 15 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L36 ANSWER 10 OF 16 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 2001:606435 HCAPLUS
DOCUMENT NUMBER: 135:238040
TITLE: Acaricidal properties of Artemisia absinthium and Tanacetum vulgare (Asteraceae) essential oils obtained by three methods of extraction
AUTHOR(S): Chiasson, Helene; Belanger, Andre; Bostanian, Noubar; Vincent, Charles; Poliquin, Andre
CORPORATE SOURCE: Urgel Delisle et Associes, Saint-Charlessur-Richelieu, QC, J0H 2G0, Can.
SOURCE: Journal of Economic Entomology (2001), 94(1), 167-171
CODEN: JEENAI; ISSN: 0022-0493
PUBLISHER: Entomological Society of America
DOCUMENT TYPE: Journal
LANGUAGE: English

AB Essential oils of Artemisia absinthium L. and Tanacetum vulgare L. were extd. by three methods, a microwave assisted process (MAP), distn. in water (DW) and direct steam distn. (DSD), and tested for their relative toxicity as contact **acaricides** to the twospotted spider mite, Tetranychus urticae Koch. All three exts. of A. absinthium and of T. vulgare were lethal to the spider mite but to variable degrees. The LC50 obtained from the DSD oil of A. absinthium was significantly lower (0.04 mg/cm2) than that of the MAP (0.13 mg/cm2) and DW (0.13 mg/cm2) oil of this plant species. DSD and DW exts. of T. vulgare were more toxic (75.6 and 60.4% mite mortality, resp., at 4% concn.) to the spider mite than the MAP ext. (16.7% mite mortality at 4% concn.). Chromatog. anal. indicated differences in compn. between the more toxic DSD oil of A. absinthium and the other two exts. of this plant, indicating that a sesquiterpene (C15H24) compd. present in the DSD oil and absent in the other two may enhance the toxicity of the DSD oil. Chem. anal. of the T. vulgare exts. indicated that .beta.-thujone is by far the major compd. of the oil (>87.6%) and probably contributes significantly to the acaricidal activity of the oil.

IT **76-22-2, Camphor 3387-41-5**, Sabinene
RL: BAC (Biological activity or effector, except adverse); BOC (Biological occurrence); BSU (Biological study, unclassified); BIOL (Biological study); OCCU (Occurrence)
(acaricidal properties of Artemisia absinthium and Tanacetum **vulgare** essential oils contg., against twospotted spider mite)

REFERENCE COUNT: 28 THERE ARE 28 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L36 ANSWER 11 OF 16 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 2001:548855 HCAPLUS
DOCUMENT NUMBER: 136:84933
TITLE: Fungitoxic activity of 12 essential oils against four postharvest citrus pathogens: chemical analysis of Thymus capitatus oil and its effect in subatmospheric pressure conditions
AUTHOR(S): Arras, Giovanni; Usai, Marianna
CORPORATE SOURCE: CNR, Istituto per la Fisiologia della Maturazione e della Conservazione del Frutto delle Specie Arboree Mediterranee, Sassari, 48-07100, Italy
SOURCE: Journal of Food Protection (2001), 64(7), 1025-1029
CODEN: JFPRDR; ISSN: 0362-028X
PUBLISHER: International Association for Food Protection
DOCUMENT TYPE: Journal
LANGUAGE: English

AB The fungitoxic activity against Penicillium digitatum, Penicillium italicum, Botrytis cinerea, and Alternaria citri of 12 essential oils (EOs) distd. from medicinal plants is reported. The results of the in vitro trials show strong fungitoxic activity of Thymus **capitatus** (L.) Hofmgg EOs, which inhibited the growth of the four fungi at a concn. of 250 ppm (vol/vol). The other 11 essences reduced the development of the fungi from 95 to 9% at 250 ppm (vol/vol). The fungitoxic activity of T. **capitatus** EOs (75, 150, and 250 ppm) on healthy orange fruits, inoculated with P. digitatum (108 conidia ml-1) by spraying and placed in 10-L desiccators, was weak at atm. pressure (3 to 10% inhibition at all three concns.), while in vacuum conditions (0.5 bar), conidial mortality on the exocarp was high (90 to 97% at all three concns.). These data proved not to be statistically different from treatments with thiabendazole-TBZ (2,000 ppm). Scanning electron microscope observations showed that T. **capitatus** EO vapors altered the morphol. of P. digitatum hyphae and conidia. The gas-chromatog. analyses of thyme EO indicated that **carvacrol** was present at 81 to 83%, p-cymene at 4.5 to 5%, .gamma.-terpinene at 2.6 to 3.3%, **caryophyllene** at 1.5 to 1.6%, .beta.-myrcene at 1.6%, and linalool at 1.1 to 1.2%. **Carvacrol** proved to be the most important fungitoxic compd. among the thyme EO constituents, but, unlike thyme EO, it caused alterations to the fruit at the concn. of 75 ppm.

IT **106-26-3**, Neral **17699-16-0**, trans-Sabinene hydrate
RL: NPO (Natural product occurrence); BIOL (Biological study); OCCU (Occurrence)
(fungitoxic activity of 12 essential oils against four postharvest citrus pathogens)

REFERENCE COUNT: 17 THERE ARE 17 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L36 ANSWER 12 OF 16 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 2000:504551 HCAPLUS
DOCUMENT NUMBER: 133:218812
TITLE: Nematicidal activity of essential oils and their components against the root-knot nematode
AUTHOR(S): Oka, Yuji; Nacar, Sengul; Putievsky, Eli; Ravid, Uzi; Yaniv, Zohara; Spiegel, Yitzhak
CORPORATE SOURCE: Department of Nematology, The Volcani Center, Bet Dagan, 50250, Israel
SOURCE: Phytopathology (2000), 90(7), 710-715
CODEN: PHYTAJ; ISSN: 0031-949X
PUBLISHER: American Phytopathological Society
DOCUMENT TYPE: Journal
LANGUAGE: English

AB Nematicidal activity of essential oils extd. from 27 spices and arom. plants were evaluated in vitro and in pot expts. Twelve of the 27 essential oils immobilized more than 80% of juveniles of the root-knot nematode Meloidogyne javanica at a concn. of 1,000 .mu.L/L. At this

concn., most of these oils also inhibited nematode hatching. Essential oils of Carum carvi, **Foeniculum vulgare**, Mentha rotundifolia, and Mentha **spicata** showed the highest nematicidal activity among the in vitro tested oils. These oils and those from **Origanum vulgare**, O. syriacum, and Coridothymus **capitatus** mixed in sandy soil at concns. of 100 and 200 mg/kg reduced the root galling of cucumber seedlings in pot expts. The main components of these essential oils were tested for their nematicidal activity. **Carvacrol**, t-anethole, thymol, and (+)-**carvone** immobilized the juveniles and inhibited hatching at >125 .mu.L/L in vitro. Most of these components mixed in sandy soil at concns. of 75 and 150 mg/kg reduced root galling of cucumber seedlings. In 3-L pot expts., nematocidal activity of the essential oils and their components was confirmed at 200 and 150 mg/kg, resp.

IT **106-26-3**, Neral **141-27-5**, Geranial **4180-23-8**, trans-Anethole
RL: AGR (Agricultural use); BIOL (Biological study); USES (Uses)
(nematocidal activity of essential oils and their components against Meloidogyne javanica)

REFERENCE COUNT: 26 THERE ARE 26 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L36 ANSWER 13 OF 16 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1989:454193 HCAPLUS
DOCUMENT NUMBER: 111:54193
TITLE: The essential oils of Tanacetum vulgare L. and Tanacetum parthenium (L.) Schultz-Bip
AUTHOR(S): De Pooter, H. L.; Vermeesch, J.; Schamp, N. M.
CORPORATE SOURCE: Fac. Agric. Sci., State Univ. Ghent, Ghent, B-9000, Belg.
SOURCE: Journal of Essential Oil Research (1989), 1(1), 9-13
CODEN: JEOREG; ISSN: 1041-2905
DOCUMENT TYPE: Journal
LANGUAGE: English

AB The volatile fraction of T. parthenium is characterized by a high **camphor** (44%) and trans-chrysanthenyl acetate (23%) content. T. **vulgare** oils, obtained from specimens growing in the province of Eastern Flanders (Belgium), conformed to the infra-specific chem. variability; three chem. types were identified: i.e., the .beta.-thujone, trans-chrysanthenyl acetate and **camphor**/.beta.-thujone types. A T. **vulgare** had a mosquito-**repellent** activity. However, the activity was much lower than that of diethyltoluamide contg. com. prepn.

IT **483-76-1**, .delta.-Cadinene **3387-41-5**, Sabinene
RL: BIOL (Biological study)
(of Tanacetum species essential oil)

IT **470-82-6**, 1,8-**Cineole**
RL: BIOL (Biological study)
(of Tanacetum **vulgare** essential oil, mosquito-**repellent** activity in relation to)

L36 ANSWER 14 OF 16 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1985:109868 HCAPLUS
DOCUMENT NUMBER: 102:109868
TITLE: Components of oil of tansy (Tanacetum vulgare) that **repel** Colorado potato beetles (Leptinotarsa decemlineata)
AUTHOR(S): Schearer, W. R.
CORPORATE SOURCE: Dep. Chem., Lehigh Univ., Bethlehem, PA, 18015, USA
SOURCE: Journal of Natural Products (1984), 47(6), 964-9
CODEN: JNPRDF; ISSN: 0163-3864
DOCUMENT TYPE: Journal
LANGUAGE: English

AB The steam distillate of fresh leaves and flowers of tansy, T. **vulgare**, was strongly **repellent** to Colorado potato beetles, L. decemlineata. Liq. chromatog. (GC) detected 56 compds. Identification of compds. was by GC-mass spectrometry. The major components, **camphor** (30%) and umbellulone (25%), show the plant to be a previously unreported chemotype. A com. oil of tansy was also found to be highly **repellent** to Colorado potato beetles; GC-mass spectroscopic anal. found bornyl acetate (74%) to be the major component. To det. the active compds. of the oils, bioassays were run using Colorado potato beetles as detectors for GC and TLC. To det. the relative strengths of **repellency**, an olfactometer was constructed using potato beetles as detectors. The strongest **repellents** found were 1,8-**cineole**, bornyl acetate, p-cymene, .gamma.-terpinene, and **camphor**.

IT **3387-41-5**
RL: BIOL (Biological study)
(of tansy oil)

L36 ANSWER 15 OF 16 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1968:33131 HCAPLUS
DOCUMENT NUMBER: 68:33131
TITLE: Essential oil of Foeniculum vulgare. II. Changes in different fennel oils before and after harvesting
AUTHOR(S): Toth, Laszlo
CORPORATE SOURCE: Tech. Hochsch., Karlsruhe, Fed. Rep. Ger.
SOURCE: Planta Medica (1967), 15(4), 371-89
CODEN: PLMEAA; ISSN: 0032-0943
DOCUMENT TYPE: Journal
LANGUAGE: German

AB The essential oils of the aerial parts of various varieties and strains of F. vulgare were studied at various stages of ontogenesis. The compn. of the oils of herb and fruit is principally detd. by genetic factors. However, the amt. of oil in the fruit is much affected by climate and time and conditions of storage of the crude drug material. Essential oil content was highest in the green fruit (F. vulgare var vulgare) (8.6%) and decreased with ripening (6.2%). This was also noted in extra-fruit parts; thus the umbel rays (without buds, flowers, or fruits) at time of flowering had 1.6% oil, at time of fruiting 0.9%. The "primary oil" of various parts of the plant (flowers, buds, young leaves, stems, roots) showed similar compn., with changes during maturation of the plant. Thus, with F. vulgare var vulgare, on ripening of fruit, there was a sharp decrease in terpene hydrocarbons (.alpha.-pinene, .alpha.-phellandrene, limonene) but an increase of these compds. in older leaves and stems. The reverse occurred for fenchone, estragol, and anethole, which increased with ripening in the fruits and decreased in later development of stems and leaves. With F. vulgare var dulce, a strong increase of limonene and decrease of anethole in the older plant parts was noted, .alpha.-pinene and .alpha.-phellandrene remaining about the same. Indian and Chinese essential oil constituents behaved much as in F. vulgare var dulce, except for an increase in fenchone in fruit and herb oils and the appearance of 2 new unidentified compds., also found in southern Italian varieties and in tubers of F. vulgare var azoricum in which the oil resembles that of young leaves of Indian fennel. In Argentine oil, young fruits contained 21% estragol, which dropped to 10% on ripening, with increase in anethole; a similar relation was found in F. vulgare var vulgare, wild Spanish, and Czechoslovak fennels. Climate had small effect on compn. but was important to percent yields. Cool rainy weather cut the yield by 25%. In the first 10 months of storage, anethole and estragol decreased; in 2 years, there was a loss of essential oil in the fruit, going from 6.2% to 4.45%. The essential oil in storage, even at 4.degree., showed a rapid decrease in anethole with a relative increase of fenchone, estragol, and p-cymol. The oil is O-sensitive due to the high content of anethole; hence air should be excluded; light and heat are not important causes of

deterioration. Distinction of var vulgare and var dulce is possible by gas chromatog. (GC), which is better than thin-layer (TLC), in which distinctions are possibly only in fenchone. For TLC, best distinction of spots comes with the use of KMnO4-concd. H2SO4 reagent followed by vanillin-H2SO4. Indian, Chinese, and Japanese oils are not distinguishable from var vulgare; var dulce is readily distinguished both by GC and TLC. TLC is also satisfactory for detecting the autoxidn. products of anethole: anisaldehyde, p-methoxyacetophenone, and 3 other unidentified compds. Anethole and estragol could not be sepd. by TLC; only in the completely oxidized oil did estragol appear in place of anethole (same Rf position). A TLC biotest was made, using Drosophila melanogaster as test animal. In the ladder-chamber system of TLC, lethal spots appeared at 2 places corresponding to dieldrin and aldrin. These **insecticides** persist as residues a long time in the essential oil following field use of the **insecticides**. Anethole is toxic to Drosophila, but not estragol or the anethole decompn. products. Two large groups of herb oils can be distinguished which may be used to distinguish strains of the species, viz., phellandrene (F. vulgare var vulgare, Japanese, Argentine, wild Spanish) and limonene (F. vulgare var dulce, F. vulgare var azoricum, Indian, Chinese) plants. It is believed that oil formation is assocd. with protein synthesis. 24 references.

IT **140-67-0 1195-79-5 4180-23-8**
RL: BIOL (Biological study)
(of **Foeniculum vulgare**, ontogenesis in relation to)

L36 ANSWER 16 OF 16 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1954:37206 HCAPLUS
DOCUMENT NUMBER: 48:37206
ORIGINAL REFERENCE NO.: 48:6655f-i,6656a
TITLE: Volatile oils. V
AUTHOR(S): Fester, Gustavo A.; Martinuzzi, Enzo A.; Ricciardi, Armando I.
SOURCE: Rev. fac. ing. quim. (Santa Fe, Arg.) (1953), Volume Date 1952-1953, 20, 21-22,43-84
DOCUMENT TYPE: Journal
LANGUAGE: Unavailable

AB cf. C.A. 46, 11586i. Lippia turbinata (poleo) tea is used as a stimulant and diuretic. The principal volatile substance is d-limonene, with a trace of **cineole**. The cinnamon-sandalwood odor that develops in storage was traced to lippione (I), an 8-hydroxy-p-menthadien-2-one not previously described, found in the fraction b. 80-102.degree. and pptd. as the thiosemicarbazone, m. 181.5.degree., and as the phenylsemicarbazone, m. .+-.133.degree.. Hydrolysis of its semicarbazone always produces lippiaphenol (II) (8-hydroxycarvacrol). I is sol. in org. solvents, reduces Fehling soln. and ammoniacal Ag, and is transformed to II by FeCl3 with production of a blackish violet color. It forms only one oxime. The structures of I and II have been accepted, except for the positions of the double bonds. Aloysia ligustrina (palo amarillo, usillo) contains l-pinene, eucalyptol, a sesquiterpene, vanillin, and isovaleric acid contg. compds. Acantholippia trifida (tomillo) contains citronellol, thymol, and palmitic and isovaleric acid contg. compds. A. seriphioides is used as a stomachic and contains thymol. A. hastulata (rica-rica) tea is used as a stomachic and contains thujone, d-isothujone, and thujyl alc. Minthostachys verticillata is the source of the newly discovered peperinic acid (I) (2,2-dihydroxy-.alpha.,4-dimethyl-.DELTA.1,.alpha.-cyclohexaneacetic acid .gamma.-lactone), m. 189.degree., that seps. from the oil on standing 2 years in the cold, and is, therefore, found in liqueurs, confections, perfumes, **insecticides**, and crema de peperina made from the plant. **Satureja** odora (mu.acte.na-mu.acte.na, salvialora) contains pulegone, d-isomenthone, lippione, and cedrole. S. parvifolia is used as an aphrodisiac and contains dl-piperitone and an unidentified diosphenol. Chersodoma argentina (salvia de la puna) contains a trace of an oil with the odor of

isovaleric acid and what was assumed to be an alc. sesquiterpene with a piperaceous odor. Chenopodium multifidum (paico hembra) yields an oil that is 44-58% ascaridole, with some cymene, limonene, **camphor**, anethole, and .beta.-phellandrene. Low yields of some of the compds. were attributed to unsatisfactory harvest labor, and to shipping and storage conditions.

IT **121-33-5**, Vanillin
(in Aloysia ligustrina oil)

IT **104-46-1**, Anethole
(in Chenopodium multifidum oil)

IT **490-03-9**, Diosphenol
(in **Satureja** parvifolia oil)

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=> d stat que
L1          841 SEA FILE=REGISTRY ABB=ON  PLU=ON  FENCHOLE OR LAVANDUOL OR
                CHAVICOL OR METHYLINONE OR MYRCENE OR NCROL OR NONANAL OR
                PHELLADRENE OR PULEGONE OR TERMINENE OR TERPENYL OR TEPINENE
                OR TERPINEOL? OR TETRAMETHYLPHENOL OR THUJENE OR THYMIL OR
                TRICYCLENE
L2         4221 SEA FILE=REGISTRY ABB=ON  PLU=ON  LINALOOL OR PINENE OR
                MENTHOL OR MENTHONE OR THYMOL OR METHYLEUGENOL OR EUGENOL  OR
                TERPINEOL OR PHELLANDRENE  OR TERPINENE  OR GERANIOL OR  NEROL
                OR  DECANAL OR MYRCENE OR OCTANAL  OR  NONANAL OR ISOBORNEOL
                OR LIMONENE
L3         9219 SEA FILE=REGISTRY ABB=ON  PLU=ON  ESTRAGOLE OR GERANIAL OR
                FENCHENE OR BISABOLENE OR LAVANDULOL OR TRICYCLENE  OR
                TETRAMETHYLPHENOL OR METHYLPENTAN? OR OCTANOL OR FENCHONE OR
                CIMEN(2A)8(2A)OL OR METHYLIONONE OR FENCHOL OR THUJENE OR
                OCIMENE
L4         1134 SEA FILE=REGISTRY ABB=ON  PLU=ON  SABINENE  OR ANETHOLE OR
                CITRAL OR  CADINENE OR MENTH(2W)2(2W)EN(2W)1(2W)OL OR ANISALDEH
                YDE OR METHOXYPHENYLACETONE CARYOPHYLLENE
L5         2386 SEA FILE=REGISTRY ABB=ON  PLU=ON  (CIS OR TRANS)(2A) ANETHOLE
                OR  ANISALDEHYDE OR ANIS(2A)(ALDEHYDE OR  KETONE) OR BISABOLENE
                 OR  BORNEOL OR (METHOXYPHENYL OR METHOXY(W)PHENYL OR MENTHYL
                OR EUGENYL OR BORNYL OR GERANYL OR LINALYL OR THYMYL)(W)
                ACETATE
L6           56 SEA FILE=REGISTRY ABB=ON  PLU=ON  METHOXYPHENYLACETONE OR
                CARYOPHYLLENE
L7        28510 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L1 OR FENCHOLE OR LAVANDUOL
                OR CHAVICOL OR METHYLINONE OR MYRCENE OR NCROL OR NONANAL OR
                PHELLADRENE OR PULEGONE OR TERMINENE OR TERPENYL OR TEPINENE
                OR TERPINEOL? OR TETRAMETHYLPHENOL OR THUJENE OR THYMIL OR
                TRICYCLENE
L8       184111 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L2 OR LINALOOL OR PINENE OR
                MENTHOL OR MENTHONE OR THYMOL OR METHYLEUGENOL OR EUGENOL  OR
                TERPINEOL OR PHELLANDRENE  OR TERPINENE  OR GERANIOL OR  NEROL
                OR  DECANAL OR MYRCENE OR OCTANAL  OR  NONANAL OR ISOBORNEOL
                OR LIMONENE
L9       132750 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L3 OR ESTRAGOLE OR GERANIAL
                OR FENCHENE OR BISABOLENE OR LAVANDULOL OR TRICYCLENE  OR
                TETRAMETHYLPHENOL OR METHYLPENTAN? OR OCTANOL OR FENCHONE OR
                CIMEN(2A)8(2A)OL OR METHYLIONONE OR FENCHOL OR THUJENE OR
                OCIMENE
L10       54434 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L4 OR SABINENE  OR ANETHOLE
                OR CITRAL OR  CADINENE OR MENTH(2W)2(2W)EN(2W)1(2W)OL OR
                ANISALDEHYDE OR METHOXYPHENYLACETONE CARYOPHYLLENE
L11       57324 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L5 OR (CIS OR TRANS)(2A)
                ANETHOLE OR  ANISALDEHYDE OR ANIS(2A)(ALDEHYDE OR  KETONE) OR
                BISABOLENE OR  BORNEOL OR (METHOXYPHENYL OR METHOXY(W)PHENYL
                OR MENTHYL OR EUGENYL OR BORNYL OR GERANYL OR LINALYL OR
                THYMYL)(W) ACETATE
L12        9259 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L6 OR METHOXYPHENYLACETONE OR
                CARYOPHYLLENE
L13        6790 SEA FILE=REGISTRY ABB=ON  PLU=ON  CADIDENE OR CAMPHENE OR
                CAMPHOR OR CARENE OR CARYOPHYLLENE OR CARVONE OR CARVACROL OR
                CARYOPHYLLENE OR CINNAMIC(W)ALDEHYDE OR CITRAL OR CITRONELLAL
                OR CINEOL OR ANISOLE OR CARYOPHYLLENE OR CINEOLE OR CYMEME
L14      231798 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L13 OR CADIDENE OR CAMPHENE
                OR CAMPHOR OR CARENE OR CARYOPHYLLENE OR CARVONE OR CARVACROL
                OR CARYOPHYLLENE OR CINNAMIC(W)ALDEHYDE OR CITRAL OR CITRONELLA
                L OR CINEOL OR ANISOLE OR CARYOPHYLLENE OR CINEOLE OR CYMEME
L15        7857 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L14 AND (REPEL? INSECTICIDE?
                OR APHICIDE? OR ACARICIDE? OR ANTIBACTERIAL(W) AGENT OR
                FUNGICIDE  OR NEMATOCIDE? OR PESTICIDE? OR TERMITICIDE?)
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L16 1553 SEA FILE=HCAPLUS ABB=ON PLU=ON L14 (L)(REPEL? INSECTICIDE? OR APHICIDE? OR ACARICIDE? OR ANTIBACTERIAL(W) AGENT OR FUNGICIDE OR NEMATOCIDE? OR PESTICIDE? OR TERMITICIDE?)
L17 750 SEA FILE=HCAPLUS ABB=ON PLU=ON L14(L)(LABIATAE OR UMBELLIFERA OR THYMBRA OR SATUREJA OR ORIGANUM OR CORYDOTHYMUS OR PINPINELLA OR FOENICULUM OR SPICATA OR MAJORANA OR CAPITATUS OR VULGARE OR SOLYMICUM OR SPYLEUM OR BILGERI OR MINUTIFLORUM OR ACCATUM OR SRIACUM OR ONITES OR ANISUM)
L18 13 SEA FILE=HCAPLUS ABB=ON PLU=ON L17 AND L16
L19 1261 SEA FILE=HCAPLUS ABB=ON PLU=ON L14 AND (LABIATAE OR UMBELLIFERA OR THYMBRA OR SATUREJA OR ORIGANUM OR CORYDOTHYMUS OR PINPINELLA OR FOENICULUM OR SPICATA OR MAJORANA OR CAPITATUS OR VULGARE OR SOLYMICUM OR SPYLEUM OR BILGERI OR MINUTIFLORUM OR ACCATUM OR SRIACUM OR ONITES OR ANISUM)
L20 103 SEA FILE=HCAPLUS ABB=ON PLU=ON L15 AND L19
L21 90 SEA FILE=HCAPLUS ABB=ON PLU=ON L20 NOT L18
L22 30 SEA FILE=HCAPLUS ABB=ON PLU=ON L21 AND PD=<OCTOBER 10, 1998
L24 9850 SEA FILE=HCAPLUS ABB=ON PLU=ON ?LABIAT? OR ?UMBELLIFER? OR LAURUS OR MOBILIS
L25 608 SEA FILE=HCAPLUS ABB=ON PLU=ON L24 AND ESSENTIAL OIL
L26 42 SEA FILE=HCAPLUS ABB=ON PLU=ON L25 AND (REPEL? INSECTICIDE? OR APHICIDE? OR ACARICIDE? OR ANTIBACTERIAL(W) AGENT OR FUNGICIDE OR NEMATOCIDE? OR PESTICIDE? OR TERMITICIDE?)
L27 34 SEA FILE=HCAPLUS ABB=ON PLU=ON L26 NOT (L18 OR L22)
L30 80 SEA FILE=HCAPLUS ABB=ON PLU=ON L24 AND ?EMULS?
L32 21 SEA FILE=HCAPLUS ABB=ON PLU=ON L30 AND (REPEL? OR INSECTICIDE? OR APHICIDE? OR ACARICIDE? OR ANTIBACTERIAL(W) AGENT OR FUNGICIDE OR NEMATOCIDE? OR PESTICIDE? OR TERMITICIDE?)
L33 19 SEA FILE=HCAPLUS ABB=ON PLU=ON L32 NOT (L18 OR L22 OR L27)
L39 2930 SEA FILE=HCAPLUS ABB=ON PLU=ON (L7 OR L8 OR L9 OR L10 OR L11 OR L12)(L)(REPEL? OR INSECTICIDE? OR APHICIDE? OR ACARICIDE? OR ANTIBACTERIAL(W) AGENT OR FUNGICIDE OR NEMATOCIDE? OR PESTICIDE? OR TERMITICIDE?)
L40 46 SEA FILE=HCAPLUS ABB=ON PLU=ON L39 AND (LABIATAE OR UMBELLIFERA OR THYMBRA OR SATUREJA OR ORIGANUM OR CORYDOTHYMUS OR PINPINELLA OR FOENICULUM OR SPICATA OR MAJORANA OR CAPITATUS OR VULGARE OR SOLYMICUM OR SPYLEUM OR BILGERI OR MINUTIFLORUM OR ACCATUM OR SRIACUM OR ONITES OR ANISUM)
L41 29 SEA FILE=HCAPLUS ABB=ON PLU=ON L40 NOT (L18 OR L22 OR L27 OR L33)

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L41 ANSWER 1 OF 29 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 2004:322144 HCAPLUS
TITLE: Acaricidal Activity of Constituents Identified in **Foeniculum vulgare** Fruit Oil against Dermatophagoides spp. (Acari: Pyroglyphidae)
AUTHOR(S): Lee, Hoi-Seon
CORPORATE SOURCE: Faculty of Biotechnology and Research Center for Industrial Development of Biofood Materials, Chonbuk National University, Jeonju, 561-756, S. Korea
SOURCE: Journal of Agricultural and Food Chemistry ACS ASAP
CODEN: JAFCAU; ISSN: 0021-8561
PUBLISHER: American Chemical Society
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Acaricidal activities of components derived from **Foeniculum vulgare** fruit oil against Dermatophagoides farinae and

Dermatophagoides pteronyssinus were examd. using direct contact application and compared with that of the com. **repellent** benzyl benzoate. The major biol. active constituent of **Foeniculum** fruit oil was characterized as (+)-**fenchone** by spectroscopic analyses. On the basis of LD50 values, the compd. most toxic to D. Farinae was p-**anisaldehyde** (11.3 mg/m2) followed by (+)-**fenchone** (38.9 mg/m2), (-)-**fenchone** (41.8 mg/m2), benzyl benzoate (89.2 mg/m2), **thymol** (90.3 mg/m2), and estragol (413.3 mg/m2). Against D. Pteronyssinus, p-**anisaldehyde** (10.1 mg/m2) was much more effective than benzyl benzoate (67.5 mg/m2), **thymol** (68.5 mg/m2), and estragol (389.9 mg/m2). These results indicate that the acaricidal activity of F. **Vulgare** fruit oil likely results from (+)-**fenchone** and p-**anisaldehyde**. (+)-**Fenchone** was 20.3 times more abundant in the oil than p-**anisaldehyde**. (+)-**Fenchone** and p-**anisaldehyde** merit further study as potential house dust mite control agents or as lead compds.

L41 ANSWER 2 OF 29 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 2004:294265 HCAPLUS
TITLE: p-anisaldehyde: acaricidal component of Pimpinella **anisum** seed oil against the house dust mites Dermatophagoides farinae and Dermatophagoides pteronyssinus
AUTHOR(S): Lee, Hoi-Seon
CORPORATE SOURCE: Research Center for Industrial Development of Biofood Materials and Institute of Agricultural Science & Technology, College of Agriculture, Chonbuk National University, Jeonju, 561-756, S. Korea
SOURCE: Planta Medica (2004), 70(3), 279-281
CODEN: PLMEAA; ISSN: 0032-0943
PUBLISHER: Georg Thieme Verlag
DOCUMENT TYPE: Journal
LANGUAGE: English
AB The acaricidal activity of anise seed oil-derived p-**anisaldehyde** and com. available components of anise seed oil was examd. against Dermatophagoides farinae and D. pteronyssinus and compared with those of the synthetic **acaricides**, benzyl benzoate and N,N-diethyl-m-toluamide (DEET). On the basis of LD50 values, the compd. most toxic to D. farinae adults was p-**anisaldehyde** (1.11 .mu.g/cm2) followed by benzyl benzoate (9.32 .mu.g/cm2), DEET (36.84 .mu.g/cm2), 3-carene (42.10 .mu.g/cm2), and estragol (43.23 .mu.g/cm2). Against D. pteronyssinus adults, p-**anisaldehyde** (0.98 .mu.g/cm2) was much more effective than benzyl benzoate (6.54 .mu.g/cm2), DEET (17.79 .mu.g/cm2), 3-carene (39.84 .mu.g/cm2), and estragol (40.11 .mu.g/cm2). P-**Anisaldehyde** was about 8.4 and 6.7 times more toxic than benzyl benzoate against D. farinae and D. pteronyssinus adults, resp. The results suggested that p-**anisaldehyde** may be useful as a lead compd. for the development of new agents for the selective control of house dust mites.

L41 ANSWER 3 OF 29 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 2003:725102 HCAPLUS
DOCUMENT NUMBER: 139:347962
TITLE: Antimycotic activity of Melaleuca alternifolia essential oil and its major components
AUTHOR(S): Oliva, B.; Piccirilli, E.; Ceddia, T.; Pontieri, E.; Aureli, P.; Ferrini, A. M.
CORPORATE SOURCE: Department of Experimental Medicine, Section of Microbiology, University of L'Aquila, L'Aquila, 67100, Italy
SOURCE: Letters in Applied Microbiology (2003), 37(2), 185-187
CODEN: LAMIE7; ISSN: 0266-8254
PUBLISHER: Blackwell Publishing Ltd.

DOCUMENT TYPE: Journal
LANGUAGE: English
AB The aim of this study was to analyze the antimycotic properties of Melaleuca alternifolia essential oil (tea tree oil, TTO) and its principal components and to compare them with the activity of 5-fluorocytosine and amphotericin B. The screening for the antimycotic activity was performed by serial 2 fold dilns. in Roswell Park Memorial Institute medium with the inclusion of Tween-80 (0.cntdot.5%). TTO and terpinen-4-ol were the most active compds. The majority of the organisms were sensitive to the essential oil, with TTO and terpinen-4-ol being the most active oils showing antifungal activity at min. inhibitory concn. values lower than other drugs. This study provides a sample large enough to det. the antifungal properties of TTO and terpinen-4-ol and suggests further studies for a possible therapeutic use.
IT **99-85-4**, .gamma.-**Terpinene** **99-86-5**, .alpha.-**Terpinene** **562-74-3**, Terpinen-4-ol **586-62-9**, Terpinolene
RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(antimycotic activity of Melaleuca alternifolia essential oil and its major components compared with **fungicides**)
REFERENCE COUNT: 7 THERE ARE 7 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L41 ANSWER 4 OF 29 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 2003:306766 HCAPLUS
DOCUMENT NUMBER: 139:2333
TITLE: Effect of presowing seed treatment and fungicide application on the yield of marjoram (**Origanum majorana** L.) grown by setting-out transplants in the open field
AUTHOR(S): Capecka, E.; Dabrowska, B.; Suchorska-Tropilo, K.; Szalacha, E.; Wiewiora, B.
CORPORATE SOURCE: Dept. of Vegetable Crops, Agric. Univ. in Krakow, Krakow, 31-425, Pol.
SOURCE: Acta Horticulturae (2003), 598, 259-264
CODEN: AHORA2; ISSN: 0567-7572
PUBLISHER: International Society for Horticultural Science
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Marjoram seeds were soaked in Gibrescol soln. (GA3), matriconditioned with MicroCel-E (MCE), and osmoconditioned in polyethylene glycol soln. (PEG). The treated seeds and control ones were either dressed with fungicide or sown without it. In order to investigate the effect of the applied treatments on the marjoram herb yield, content and compn. of essential oil and oil yield, field expts. were conducted in two regions of Poland (Warsaw and Krakow). Transplants were grown in the greenhouse. Each tested method of presowing treatment increased the seed vigor and the highest improvement was noted with MCE and followed by PEG and GA3, resp. Fungicide application did not cause pos. effects. That was also confirmed with the results of field expts. where fungicide applying either showed no significant differences (Krakow) or even decreased the yield of marjoram herb and oil (Warsaw). The advantageous effect of presowing seed conditioning and treating with GA3 on the marjoram yield was obsd. in both exptl. locations, even though its degree was different. Tested methods of seed treatment did not change marjoram oil compn. considerably.
IT **78-70-6** **80-56-8**, .alpha.-**Pinene** **87-44-5**, .beta.-**Caryophyllene** **89-83-8**, **Thymol** **98-55-5**, .alpha.-**Terpineol** **99-85-4**, .gamma.-**Terpinene** **99-86-5**, .alpha.-**Terpinene** **105-87-3**, **Geranyl acetate** **106-24-1**, **Geraniol** **115-95-7**, **Linalyl acetate** **123-35-3**, .beta.-**Myrcene**

127-91-3, .beta.-**Pinene 138-86-3**,
Limonene 507-70-0, **Borneol 562-74-3**
2867-05-2, .alpha.-**Thujene 3387-41-5**,
Sabinene 6753-98-6, .alpha.-Humulene **17699-16-0**
, trans-**Sabinene** hydrate
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(effect of presowing seed treatment and **fungicides** on
marjoram oil compn. and yield)
REFERENCE COUNT: 8 THERE ARE 8 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L41 ANSWER 5 OF 29 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 2003:153701 HCAPLUS
DOCUMENT NUMBER: 138:234682
TITLE: Antifungal activity of the essential oil of Agastache rugosa Kuntze and its synergism with ketoconazole
AUTHOR(S): Shin, S.; Kang, C.-A.
CORPORATE SOURCE: College of Pharmacy, Duksung Women's University, Seoul, 132-714, S. Korea
SOURCE: Letters in Applied Microbiology (2003), 36(2), 111-115
CODEN: LAMIE7; ISSN: 0266-8254
PUBLISHER: Blackwell Science Ltd.
DOCUMENT TYPE: Journal
LANGUAGE: English
AB To evaluate the fungitoxic activity of the essential oil of Agastache rugosa alone and to det. its combination effect with ketoconazole against Blastoschizomyces **capitatus**. The antifungal activities of the essential oil of A. rugosa and its main constituent estragole were investigated using the broth microdilution, disk diffusion methods, and checkerboard microtiterassay. Both estragole and the essential oil exhibited strong activities against the tested fungi and showed synergism with ketoconazole against B. **capitatus**. Both estragole and the essential oil of A. rugosa have significant growth-inhibiting activities against B. **capitatus** showing strong synergistic effect with ketoconazole. The essential oil of A. rugosa, combined with ketoconazole, may be particularly useful against B. **capitatus**, a rare pathogenic fungus documented to cause severe and fatal mycoses in immunocompromised patients.
REFERENCE COUNT: 21 THERE ARE 21 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L41 ANSWER 6 OF 29 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 2002:791480 HCAPLUS
DOCUMENT NUMBER: 137:381235
TITLE: Repellent activity of constituents identified in **Foeniculum vulgare** fruit against Aedes aegypti (Diptera: Culicidae)
AUTHOR(S): Kim, Do-Hyoung; Kim, Soon-Il; Chang, Kyu-Sik; Ahn, Young-Joon
CORPORATE SOURCE: School of Agricultural Biotechnology, Seoul National University, Suwon, 441-744, S. Korea
SOURCE: Journal of Agricultural and Food Chemistry (2002), 50(24), 6993-6996
CODEN: JAFCAU; ISSN: 0021-8561
PUBLISHER: American Chemical Society
DOCUMENT TYPE: Journal
LANGUAGE: English
AB The **repellent** activity of materials derived from the methanol ext. of fruits from **Foeniculum vulgare** against hungry Aedes aegypti females was examd. using skin and patch tests and compared with that of the com. N,N-diethyl-m-toluamide (deet) and (Z)-9-octadecenoic acid. The biol. active constituents of the **Foeniculum** fruits were characterized as (+)-**fenchone** and

(E)-9-octadecenoic acid by spectroscopic analyses. Responses varied according to compd., dose, and exposure time. In a skin test with female mosquitoes, at a dose of 0.4 mg/cm2, (+)-**fenchone** and (Z)-9-octadecenoic acid exhibited moderate **repellent** activity at 30 min after treatment, whereas deet provided >1 h of protection against adult mosquitoes at 0.2 mg/cm2. (Z)-9-Octadecenoic acid was a more potent **repellent** agent than (E)-9-octadecenoic acid. (+)-**Fenchone** and (E)-9-octadecenoic acid merit further study as potential mosquito **repellent** agents or as lead compds.

IT **4695-62-9**, (+)-**Fenchone**
RL: BSU (Biological study, unclassified); BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(**repellent** activity of **Foeniculum vulgare** fruit constituents against Aedes aegypti)

REFERENCE COUNT: 32 THERE ARE 32 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L41 ANSWER 7 OF 29 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 2002:404848 HCAPLUS
DOCUMENT NUMBER: 137:243389
TITLE: Influence of plant volatiles on feeding damage caused by the onion thrips Thrips tabaci
AUTHOR(S): Koschier, Elisabeth H.; Sedy, Katrin A.; Novak, Johannes
CORPORATE SOURCE: Institute for Plant Protection, University of Agricultural Sciences (BOKU) Vienna, Vienna, 1190, Austria
SOURCE: Crop Protection (2002), 21(5), 419-425
CODEN: CRPTD6; ISSN: 0261-2194
PUBLISHER: Elsevier Science Ltd.
DOCUMENT TYPE: Journal
LANGUAGE: English

AB Leaf disk bioassays were conducted to det. the effects of essential oils and their volatile constituents from plant species (Lamiaceae family) at three concns. ranging from 0.01% to 1% on the feeding activity of adult female onion thrips (Thrips tabaci Lindeman; Thysanoptera: Thripidae). The percentage of feeding damage area on leek (Allium porrum L.) leaf disks and the adult survival was assessed after 24 h. Onion thrips were significantly deterred by the essential oils of marjoram (**Origanum majorana** L.), lavender (Lavandula angustifolia L.) and mint (Mentha arvensis L.) at several concns., and by the oil of rosemary (Rosmarinus officinalis L.) at 1% concn. Furthermore, thrips feeding damage was reduced as a result of **linalool** and **eugenol** application at three concns. Adult survival on the leaf disk surface was significantly decreased by application of terpinen-4-ol at 1% concn. Evaluation of the potential of biol. active plant volatiles against T. tabaci may provide a new approach to the development of antifeedants and/or natural **insecticides** for use in both biol. and integrated pest management strategies.

REFERENCE COUNT: 35 THERE ARE 35 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L41 ANSWER 8 OF 29 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 2002:325416 HCAPLUS
DOCUMENT NUMBER: 137:42944
TITLE: Insecticidal properties of essential plant oils against the mosquito Culex pipiens molestus (Diptera: Culicidae)
AUTHOR(S): Traboulsi, Abdallah F.; Taoubi, K.; El-Haj, Samih; Bessiere, J. M.; Rammal, Salma
CORPORATE SOURCE: Faculty of Agricultural Sciences, Lebanese University, Beirut, Lebanon
SOURCE: Pest Management Science (2002), 58(5), 491-495

CODEN: PMSCFC; ISSN: 1526-498X
PUBLISHER: John Wiley & Sons Ltd.
DOCUMENT TYPE: Journal
LANGUAGE: English

AB The insecticidal activities of essential oil exts. from leaves and flowers of arom. plants against fourth-instar larvae of the mosquito Culex pipiens molestus Forskal were detd. Exts. of Myrtus communis were found to be the most toxic, followed by those of **Origanum** syriacum , Mentha microphylla Koch, Pistacia lentiscus and Lavandula stoechas with LC50 values of 16, 36, 39, 70 and 89 mg L-1, resp. Over 20 major components were identified in exts. from each plant species. Eight pure components (1,8-cineole, menthone, linalool, terpineol, carvacrol, thymol, (1S)-(-)-.alpha.-pinene and (1R)-(+)-.alpha.-pinene) were tested against the larvae. Thymol, carvacrol, (1R)-(+)-.alpha.-pinene and (1S)-(-)-.alpha.-pinene were the most toxic (LC50 = 36-49 mg L-1), while menthone, 1,8-cineole, linalool and terpineol (LC50 = 156-194 mg L-1) were less toxic.

IT **76-49-3P, Bornyl acetate 78-70-6P, Linalool 80-26-2P**, .alpha.-Terpinyl acetate **89-80-5P, Menthone 89-82-7P, Pulegone 89-83-8P, Thymol 98-55-5P**, .alpha.-**Terpineol 99-86-5P**, .alpha.-**Terpinene 105-87-3P, Geranyl acetate 123-35-3P** , **Myrcene 499-75-2P**, Carvacrol **515-00-4P**, Myrtenol **586-62-9P 1195-79-5P, Fenchone 7785-26-4P**, (1S)-(-)-.alpha.-**Pinene 7785-70-8P** , (1R)-(+)-.alpha.-**Pinene**
RL: BUU (Biological use, unclassified); PUR (Purification or recovery); BIOL (Biological study); PREP (Preparation); USES (Uses)
(essential oils and their components as **insecticides** against Culex pipiens molestus)

REFERENCE COUNT: 29 THERE ARE 29 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L41 ANSWER 9 OF 29 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 2002:31208 HCAPLUS
DOCUMENT NUMBER: 136:90675
TITLE: An insect repellent isolated from **Foeniculum vulgare** fruit
INVENTOR(S): Ahn, Young-Joon; Kim, Young-Soo; Kim, Do-Hyoung; Kim, Soon-Il
PATENT ASSIGNEE(S): Naturobiotech Co., Ltd., S. Korea
SOURCE: PCT Int. Appl., 25 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2002002065	A1	20020110	WO 2000-KR1097	20001002
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
EP 1296637	A1	20030402	EP 2000-966566	20001002
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,				

IE, SI, LT, LV, FI, RO, MK, CY, AL
JP 2004501945 T2 20040122 JP 2002-506687 20001002
PRIORITY APPLN. INFO.: KR 2000-38336 A 20000705
WO 2000-KR1097 W 20001002

AB The present invention relates to an insect **repellent** isolated from F. **vulgare** fruit, and more particularly, to an insect **repellent** comprising one or more compds. selected from the group consisting of fennel oil which is isolated from F. **vulgare** fruit, (+)-**fenchone** and E-9-octadecenoic acid. The fennel oil, (+)-**fenchone** and E-9-octadecenoic acid of the present invention are provided as insect **repellent** components due to their lack of toxicity to people. (+)-**Fenchone** had a perfect **repellent** activity, the same as DEET, and the E-9-octadecenoic acid had an 80.4% **repellency**.

IT **4695-62-9P**, (+)-**Fenchone**
RL: BUU (Biological use, unclassified); PUR (Purification or recovery); BIOL (Biological study); PREP (Preparation); USES (Uses)
(insect **repellents** isolated from **Foeniculum vulgare** fruit)

REFERENCE COUNT: 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L41 ANSWER 10 OF 29 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 2002:31186 HCAPLUS
DOCUMENT NUMBER: 136:81326
TITLE: Insecticidal compositions comprising fennel extract and/or its components
INVENTOR(S): Kim, Do-Hyoung; Chang, Kyu-Sik; Ahn, Young-Joon; Kim, Young-Soo; Park, Byeong-Mook; Kim, Hyun-Cheol; Kim, Soon-Il
PATENT ASSIGNEE(S): Naturobiotech Co., Ltd., S. Korea
SOURCE: PCT Int. Appl., 36 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2002001959	A1	20020110	WO 2001-KR620	20010414

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG

AU 2001052713 A5 20020114 AU 2001-52713 20010414
PRIORITY APPLN. INFO.: KR 2000-38337 A 20000705
KR 2001-14802 A 20010322
WO 2001-KR620 W 20010414

AB The present invention relates to **pesticide** compn., and more particularly, to **pesticide** compn. comprising fennel ext. or at least one compd. selected from a group consisting of **estragole**, **fenchone** and **anethole** isolated from fennel seed. Fennel ext., **estragole**, **fenchone** and **anethole** in the present invention have insecticidal activity against insect in stored product, and **anethole** has insecticidal activity against sanitary insect pests. Compds. isolated from fennel seed in the present invention are harmless and can be used as **insecticide**.

REFERENCE COUNT: 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L41 ANSWER 11 OF 29 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 2001:398667 HCAPLUS
DOCUMENT NUMBER: 135:163600
TITLE: Effect of volatile oil constituents of Mentha species against the stored grain pests, Callosobruchus maculatus and Tribolium castaneum
AUTHOR(S): Tripathi, Arun Kumar; Prajapati, Veena; Aggarwal, Kishan Kumar; Kumar, Sushil
CORPORATE SOURCE: Bioprospection Group, Genetic Resources and Biotechnology Division, Central Institute of Medicinal and Aromatic Plants, Lucknow, 226 015, India
SOURCE: Journal of Medicinal and Aromatic Plant Sciences (2000), 22(1B), 549-556
CODEN: JMASF6
PUBLISHER: Central Institute of Medicinal and Aromatic Plants
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Essential oils of Mentha arvensis, M. citrata, M. piperita and M. **spicata** and their fractions rich in **menthone, menthol, linalool, linalyl acetate,** menthofuran, **limonene** and l-carvone were tested for their fumigant toxicity against flour beetle (Tribolium castaneum) and pulse beetle (Callosobruchus maculatus) and **repellent,** contact toxicity and development inhibition against adults, larvae and pupae of T. castaneum, resp. Fumigation of all the aroma chems. was more effective against C. maculatus than T. castaneum. Liq. **menthol** was the most effective fumigant. Other effective fumigants included M. arvensis and M. piperita oils, **menthone, linalyl acetate** and menthofuran. L-carvone proved to be moderately effective fumigant on both C. maculatus and T. castaneum. The essential oils of M. arvensis, M. citrata, M. piperita and M. **spicata** possessed **repellent** activity against T. castaneum adults. Topical application of menthofuran was most effective against larvae of T. castaneum. M. **spicata** was proved to be the most effective larvicidal essential oil. L-carvone was obsd. to be the most effective adulticidal agent. M. arvensis and M. **spicata** essential oils possessed highly effective adulticidal activity. M. arvensis and M. **spicata** oils and their monoterpene constituents **menthone, menthol,** l-carvone have been identified as potent anti-insect agents for grain protection.
REFERENCE COUNT: 17 THERE ARE 17 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L41 ANSWER 12 OF 29 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 2001:166880 HCAPLUS
DOCUMENT NUMBER: 134:233048
TITLE: Contact and fumigant activities of constituents of **Foeniculum vulgare** fruit against three coleopteran stored-product insects
AUTHOR(S): Kim, Do-Hyoung; Ahn, Young-Joon
CORPORATE SOURCE: School of Agricultural Biotechnology, Seoul National University, Suwon, 441-744, S. Korea
SOURCE: Pest Management Science (2001), 57(3), 301-306
CODEN: PMSCFC; ISSN: 1526-498X
PUBLISHER: John Wiley & Sons Ltd.
DOCUMENT TYPE: Journal
LANGUAGE: English
AB The insecticidal activities of materials derived from the fruit of fennel, **Foeniculum vulgare,** against adults of Sitophilus oryzae, Callosobruchus chinensis and Lasioderma serricorne were examd. using

direct contact application and fumigation methods. The biol. active constituents of the **Foeniculum** fruits were characterized as the phenylpropenes (E)-anethole and estragole, and the monoterpene (+)-fenchone, by spectroscopic anal. Responses varied with insect species, compd., dose and exposure time. In a filter paper diffusion test, estragole at 0.168mg cm-2 caused 91% mortality to S oryzae adults within 1 day after treatment (DAT), whereas (+)-fenchone and (E)-anethole gave over 90% mortality at 2 and 4 DAT, resp. Against C. chinensis adults, all test compds. revealed potent insecticidal activities at 0.021mgcm-2 at 2 DAT. Against L. serricorne adults at 0.105mgcm-2, (E)-anethole gave 100% mortality at 1 DAT, whereas 90 and 60% mortality at 4 DAT was achieved with estragole and (+)-fenchone, resp. In a fumigation test, the test compds. were much more effective against adults of S. oryzae, C. chinensis and L. serricorne in closed cups than in open ones, indicating that the insecticidal activity of test compds. was largely attributable to fumigant action. As naturally occurring insect-control agents, the F. **vulgare** fruit-derived materials described could be useful for managing field populations of S. oryzae, C. chinensis and L. serricorne.

REFERENCE COUNT: 29 THERE ARE 29 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L41 ANSWER 13 OF 29 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 2001:78286 HCAPLUS
DOCUMENT NUMBER: 134:136668
TITLE: Extraction of bioactive materials from plants
INVENTOR(S): Pisacane, Anthony
PATENT ASSIGNEE(S): UK
SOURCE: PCT Int. Appl., 25 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2001007135	A2	20010201	WO 2000-GB2870	20000727
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
GB 2352396	A1	20010131	GB 1999-17504	19990727
GB 2352397	A1	20010131	GB 1999-17505	19990727

PRIORITY APPLN. INFO.:		
GB 1999-17504	A	19990727
GB 1999-17505	A	19990727
GB 1999-19724	A	19990820

AB Method are described for extg. materials, particularly bioactive materials with insecticidal, bactericidal and/or insect **repellent** properties from plants such as Chrysanthemum or Helianthus, by solvent extn. using plant-derived solvents such as terpenes, e.g., **terpineol** and other plant oils. Thus, flowers of Leucanthemum **vulgare** were gathered at full bloom and mixed with **terpineol** and the mixt. was ground. Within a few minutes, the color of the **terpineol** became yellow as a result of the extn. of the material from the flowers.

L41 ANSWER 14 OF 29 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 2000:260562 HCAPLUS
DOCUMENT NUMBER: 132:305869
TITLE: Genes for enzymes of monoterpene biosynthesis and their use in the development of insect-resistant plants
INVENTOR(S): Meyer, Terry Euclaire; Yalpani, Nasser
PATENT ASSIGNEE(S): Pioneer Hi-Bred International, Inc., USA
SOURCE: PCT Int. Appl., 82 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 4
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2000022150	A2	20000420	WO 1999-US23180	19991005
WO 2000022150	A3	20001005		
W: AE, AL, AM, AT, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, CZ, DE, DE, DK, DK, DM, EE, EE, ES, FI, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
US 6291745	B1	20010918	US 1998-172339	19981014
AU 9962900	A1	20000501	AU 1999-62900	19991005

PRIORITY APPLN. INFO.:

US 1998-172339	A1	19981014
US 1993-42199	B3	19930402
US 1993-153544	B2	19931116
US 1995-449061	B2	19950524
WO 1999-US23180	W	19991005

AB Methods for manipulating metabolic pathway in plants, particularly those pathways involved in the biosynthesis of monoterpenes are provided. Methods are directed at transforming plants with one or more nucleotide sequences encoding the enzyme GPP synthase, and the monoterpene synthases **limonene**-, carveol and S-**linalool** synthase. Methods for creating or enhancing resistance to insects in plants by transforming plants with GPP- and/or monoterpene synthases, to generate plants producing monoterpenes in amt. effective for resistance to insects are also provided. **Limonene** was found to be an effective antifeedant and **insecticide** for larvae of southern corn rootworm and European corn borer. The prepn. of transgenic corn expressing a cloned **limonene** synthase gene is described.

L41 ANSWER 15 OF 29 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 2000:122572 HCAPLUS
DOCUMENT NUMBER: 132:232995
TITLE: Botanical biocides 4. Mosquitocidal activity of certain Thymus **capitatus** constituents
AUTHOR(S): Mansour, S. A.; Messeha, S. S.; El-Gengaihi, S. E.
CORPORATE SOURCE: Pesticide Chemistry Department, National Research Centre, Cairo, Egypt
SOURCE: Journal of Natural Toxins (2000), 9(1), 49-62
CODEN: JNTOER; ISSN: 1058-8108
PUBLISHER: Alaken
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Successive extn. of thyme, Thymus **capitatus** (L.) Hoffm. and Link (Lamiaceae), by different solvents of increasing polarity, showed that potency was highly attributed to the nonpolar fraction (e.g., petroleum

ether) when tests were carried out against the larvae and adults of Culex pipiens (L). Mosquitocidal activity was high in the volatile oil, unsaponifiable portion, and certain compds. isolated from the unsaponifiable portion (e.g., **thymol**, .alpha.-amyrin, carvacrol + .beta.-**caryophyllene**). The volatile oil, **thymol**, and the unsaponifiable portion had high larvicidal potency (LC50 = 49.0, 58.0, and 100.0 ppm, resp.). Nonlethal concns. of these substances synergized the toxicity of malathion, and induced additive or antagonistic effects when mixed with permethrin or pirimiphos-Me. The unsaponifiable portion and volatile oil showed the highest adulticidal potency (LC50 = 0.0070 and 0.0076 mg/cm2, resp.). The efficacy of the tested candidates as **repellent** agents was in the order: unsaponifiable portion > .alpha.-amyrin > **thymol** > volatile oil > carvacrol + .beta.-**caryophyllene**. **Thymol** as well as the volatile oil affected egg hatchability, causing Sterility Indexes of 0.70 and 0.74, resp., while the unsaponifiable portion caused lower degree of sterility (0.81).

REFERENCE COUNT: 33 THERE ARE 33 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L41 ANSWER 16 OF 29 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1998:447916 HCAPLUS
DOCUMENT NUMBER: 129:187062
TITLE: Essential-oil-mediated interactions between oregano plants and Helicidae grazers
AUTHOR(S): Vokou, D.; Tziolas, M.; Bailey, S. E. R.
CORPORATE SOURCE: Dep. Ecology, School Biology, Aristotle Univ., Thessaloniki, 54 006, Greece
SOURCE: Journal of Chemical Ecology (1998), 24(7), 1187-1202
CODEN: JCECD8; ISSN: 0098-0331
PUBLISHER: Plenum Publishing Corp.
DOCUMENT TYPE: Journal
LANGUAGE: English

AB Arom. plants dominate in Mediterranean-type ecosystems. They often produce remarkable quantities of essential oils contg. high amts. of phenolic isoprenoids, such as **thymol** and carvacrol. The purpose of this work was to examine the interactions between commonly occurring arom. plants in the Mediterranean environment and their snail grazers. The arom. plants used were two **Origanum vulgare** subspecies, subsp. hirtum and subsp. **vulgare**. They differ in the content and the qual. compn. of their essential oil; subsp. hirtum contains a much larger amt. and is rich in phenolic compds. Their effect on the foraging behavior of three snail species, native in Greece, was studied; the snail species were Helix lucorum, H. aspersa, and Eobania vermiculata. The snails' responses to different food sources, raw or processed, with or without essential oils, were evaluated during the different stages of the foraging cycle. During the encounter stage, snails were more **repelled** than attracted when close to phenol-rich foods. During the acceptance stage, all snail species tended to reject food types that contained high concns. of subsp. hirtum essential oil. At the feeding stage, subsp. hirtum essential oil caused redn. of daily consumption rates. Overall, the essential oil of O. **vulgare** subsp. **vulgare** did not produce any marked change in the snails' behavior. In contrast, that of O. **vulgare** subsp. hirtum had a **repellent** effect, particularly when present in naturally occurring high concns. Among the snail species, H. lucorum, which does not share the same biotope with O. **vulgare** subsp. hirtum, was the least tolerant to its essential oil.

REFERENCE COUNT: 30 THERE ARE 30 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L41 ANSWER 17 OF 29 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1998:208778 HCAPLUS

DOCUMENT NUMBER: 128:305149
TITLE: Repellents for control of Dermatophagoides
INVENTOR(S): Kusuki, Hirofumi; Fujii, Masashi
PATENT ASSIGNEE(S): Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 12 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 10087409	A2	19980407	JP 1996-279823	19960913

PRIORITY APPLN. INFO.: JP 1996-279823 19960913

AB The repellents contain .gtoreq.1 compd. selected from 89 compd. classes including essential oils, glycerides, plant exts., and esters (compds. of the 89 classes are described in the claim) and are applied at 0.01-100 wt.% to household utensils, cosmetics, quasi-drugs, and topical prepns. Tetrahydrolinalool showed repellent effects against Dermatophagoides pteronyssinus and D. farinae with a min. effective concn. of 1.0 wt.%.

IT **76-49-3, Bornyl acetate 78-69-3,** Tetrahydrolinalool **107-41-5,** Hexylene glycol **115-99-1,** Linalyl formate **128-51-8,** Nopyl acetate **491-07-6,** Isomenthone **562-74-3,** 1-Terpinen-4-ol **1335-94-0,** Irone **62395-45-3**
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BUU (Biological use, unclassified); TEM (Technical or engineered material use); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(**repellents** for control of Dermatophagoides)

L41 ANSWER 18 OF 29 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1998:172884 HCAPLUS
DOCUMENT NUMBER: 128:189480
TITLE: Insecticidal and genotoxic activities of oregano essential oils
AUTHOR(S): Karpouhtsis, Ioannis; Pardali, Evagelia; Feggou, Efi; Kokkini, Stella; Scouras, Zacharias G.; Mavragani-Tsipidou, Penelope
CORPORATE SOURCE: Department of Genetics Development and Molecular Biology and Laboratory of Systematic Botany and Phytogeography School of Biology, Faculty of Science Aristotle University of Thessaloniki, Thessaloniki, GR-54006, Greece
SOURCE: Journal of Agricultural and Food Chemistry (1998), 46(3), 1111-1115
CODEN: JAFCAU; ISSN: 0021-8561
PUBLISHER: American Chemical Society
DOCUMENT TYPE: Journal
LANGUAGE: English

AB The essential oils (EOs) obtained from the oregano plants **Origanum vulgare** subsp. hirtum, Coridothymus **capitatus**, and **Satureja thymbra** were examd. by a combination of GC and GC-MS and found to be rich in carvacrol, **thymol**, .gamma.-**terpinene**, and p-cymene. These EOs and their main constituents, carvacrol and **thymol**, were tested for insecticidal and genotoxic activities on Drosophila. The EO of S. **thymbra** was found to be the most effective as an **insecticide**, while carvacrol was found to be more toxic than **thymol**. The toxicities of carvacrol and **thymol** do not correspond to their participation in the EOs, and mixts. of these two phenols in levels resembling their content in the three oils showed that the toxicity of carvacrol was reduced in the

presence of **thymol**, thus suggesting antagonistic phenomena. The somatic mutation and recombination test on Drosophila revealed that, among the compds. studied, only **thymol** exhibits genotoxic activity.
REFERENCE COUNT: 36 THERE ARE 36 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L41 ANSWER 19 OF 29 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1997:403106 HCAPLUS
DOCUMENT NUMBER: 127:62000
TITLE: Insecticidal and genotoxic activities of mint essential oils
AUTHOR(S): Franzios, Gerasimos; Mirotsou, Maria; Hatziapostolou, Emmanouel; Kral, Jiri; Scouras, Zacharias G.; Mavragani-Tsipidou, Penelope
CORPORATE SOURCE: Department of Genetics Development and Molecular Biology School of Biology Faculty of Science, Aristotle University of Thessaloniki (AUTH), Thessaloniki, GR-54006, Greece
SOURCE: Journal of Agricultural and Food Chemistry (1997), 45(7), 2690-2694
CODEN: JAFCAU; ISSN: 0021-8561
PUBLISHER: American Chemical Society
DOCUMENT TYPE: Journal
LANGUAGE: English
AB The essential oils (EOs) extd. from the mint species Mentha pulegium and Mentha **spicata**, together with their main constituents, **pulegone**, **menthone**, and carvone, were tested for insecticidal and genotoxic activities on Drosophila melanogaster. The EOs of both arom. plants showed strong insecticidal activity, while only the oil of M. **spicata** exhibited a mutagenic one. Among the constituents studied, the most effective **insecticide** was found to be **pulegone**, while the most effective for genotoxic activity was shown by **menthone**. Both toxic and genotoxic activities of the EOs of the two studied mint plants are not in accordance with those of their main constituents, **pulegone**, **menthone**, and carvone. **Pulegone** is significantly more effective (9 times) as an **insecticide**, while **menthone** and carvone are less effective (6 and 2 times, resp.) **insecticides** when used in their authentic forms, and a mixt. of authentic **pulegone** and **menthone**, in levels resembling their content in the oil of M. pulegium, showed that the strong toxicity of **pulegone** is suppressed in the presence of **menthone**. All the above suggest that synergistic/antagonistic phenomena may be involved that alter the toxicity of the whole EO.

L41 ANSWER 20 OF 29 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1995:624745 HCAPLUS
DOCUMENT NUMBER: 123:196976
TITLE: Screening for antioxidant activity of essential oils obtained from spices
AUTHOR(S): Lagouri, V.; Boskou, D.
CORPORATE SOURCE: Faculty Chemistry, Aristotle University Thessaloniki, Thessaloniki, GR-54006, Greece
SOURCE: Developments in Food Science (1995), 37A, 869-79
CODEN: DFSCDX; ISSN: 0167-4501
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Recent research has concd. on natural sources of antioxidants such as plant exts., herbs, spices, seeds and fermn. products. The presence of active components in spices has been demonstrated over the last 30 yr. Exts. obtained by food grade solvents were mainly examd. for nonvolatile phenolic constituents, while less attention was given to the essential oil fraction and the extent to which this fraction may contribute to the

antioxidant effect of the spice. In this paper, various essential oils were screened for their antioxidant activity by measuring bleaching of beta-carotene in the coupled oxidn. of beta-carotene and linoleic acid. The choice of the plants studied was based on two criteria: a. The plant is known for antioxidant activity. B. There is evidence from the literature that the essential oil contains compds. with a phenolic ring and an electron **repelling** group. Oils contg. carvacrol, **thymol** and **eugenol** showed marked antioxidant activity coeffs. Oils from plants of oregano species protected purified lard stored at 35.degree.C. The inhibition of oxidn. exhibited was highly carvacrol + **thymol** content dependent.

L41 ANSWER 21 OF 29 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1989:454193 HCAPLUS
DOCUMENT NUMBER: 111:54193
TITLE: The essential oils of Tanacetum **vulgare** L. and Tanacetum parthenium (L.) Schultz-Bip
AUTHOR(S): De Pooter, H. L.; Vermeesch, J.; Schamp, N. M.
CORPORATE SOURCE: Fac. Agric. Sci., State Univ. Ghent, Ghent, B-9000, Belg.
SOURCE: Journal of Essential Oil Research (1989), 1(1), 9-13
CODEN: JEOREG; ISSN: 1041-2905
DOCUMENT TYPE: Journal
LANGUAGE: English
AB The volatile fraction of T. parthenium is characterized by a high camphor (44%) and trans-chrysanthenyl acetate (23%) content. T. **vulgare** oils, obtained from specimens growing in the province of Eastern Flanders (Belgium), conformed to the infra-specific chem. variability; three chem. types were identified: i.e., the .beta.-thujone, trans-chrysanthenyl acetate and camphor/.beta.-thujone types. A T. **vulgare** had a mosquito-repellent activity. However, the activity was much lower than that of diethyltoluamide contg. com. prepn.
IT **98-55-5**, .alpha.-**Terpineol** **99-86-5**, .alpha.-**Terpinene** **123-35-3**, **Myrcene** **515-00-4**, Myrtenol **564-94-3** **586-62-9**, Terpinolene
RL: BIOL (Biological study)
(of Tanacetum **vulgare** essential oil, mosquito-**repellent** activity in relation to)

L41 ANSWER 22 OF 29 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1989:211265 HCAPLUS
DOCUMENT NUMBER: 110:211265
TITLE: Insect **repellent** property of essential oils of **Foeniculum vulgare**, Pimpinella **anisum** and **anethole**
AUTHOR(S): Shukla, H. S.; Upadhyay, P. D.; Tripathi, S. C.
CORPORATE SOURCE: Dep. Bot., Univ. Gorakhpur, Gorakhpur, 273 009, India
SOURCE: Pesticides (1989), 23(1), 33-5
CODEN: PSTDAN; ISSN: 0031-6148
DOCUMENT TYPE: Journal
LANGUAGE: English
AB The insect **repellent** property of the volatile constituents of F. **vulgare**, P. **anisum** and **anethole** was studied using Tribolium castaneum as the test insect. A Y-tube olfactometer was used for the study. **Anethole** had the highest **repellent** action and F. **vulgare** showed minimal activity.
IT **104-46-1**, **Anethole**
RL: BIOL (Biological study)
(as insect **repellent** for Tribolium castaneum)

L41 ANSWER 23 OF 29 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1985:109868 HCAPLUS
DOCUMENT NUMBER: 102:109868

TITLE: Components of oil of tansy (Tanacetum **vulgare**) that repel Colorado potato beetles (Leptinotarsa decemlineata)
AUTHOR(S): Schearer, W. R.
CORPORATE SOURCE: Dep. Chem., Lehigh Univ., Bethlehem, PA, 18015, USA
SOURCE: Journal of Natural Products (1984), 47(6), 964-9
CODEN: JNPRDF; ISSN: 0163-3864
DOCUMENT TYPE: Journal
LANGUAGE: English
AB The steam distillate of fresh leaves and flowers of tansy, T. **vulgare**, was strongly **repellent** to Colorado potato beetles, L. decemlineata. Liq. chromatog. (GC) detected 56 compds. Identification of compds. was by GC-mass spectrometry. The major components, camphor (30%) and umbellulone (25%), show the plant to be a previously unreported chemotype. A com. oil of tansy was also found to be highly **repellent** to Colorado potato beetles; GC-mass spectroscopic anal. found **bornyl acetate** (74%) to be the major component. To det. the active compds. of the oils, bioassays were run using Colorado potato beetles as detectors for GC and TLC. To det. the relative strengths of **repellency**, an olfactometer was constructed using potato beetles as detectors. The strongest **repellents** found were 1,8-cineole, **bornyl acetate**, p-cymene, .gamma.-**terpinene**, and camphor.
IT **76-49-3 80-56-8 89-83-8 99-85-4**
RL: BIOL (Biological study)
(of tansy oil, Colorado potato beetle **repellency** by)

L41 ANSWER 24 OF 29 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1984:567515 HCAPLUS
DOCUMENT NUMBER: 101:167515
TITLE: Response of Colorado potato beetles, Leptinotarsa decemlineata (Say), to volatile components of tansy, Tanacetum **vulgare**
AUTHOR(S): Panasiuk, Oksana
CORPORATE SOURCE: East. Reg. Res. Cent., Agric. Res. Serv., Philadelphia, PA, 19118, USA
SOURCE: Journal of Chemical Ecology (1984), 10(9), 1325-33
CODEN: JCECD8; ISSN: 0098-0331
DOCUMENT TYPE: Journal
LANGUAGE: English
AB The responses of Colorado potato beetle, L. decemlineata, to volatile components of tansy, T. **vulgare**, were investigated in order to establish a chem. basis for obsd. redn. in beetle populations when potatoes, Solanum tuberosum, were interplanted with tansy. Colorado potato beetles exhibited avoidance behavior to tansy oil, volatiles from intact tansy plants, a "hydrocarbon fraction" of tansy oil, obtained by fractionation on alumina, and five of the 13 known components of tansy oil that were tested. One constituent of tansy oil, .alpha.-pinene [80-56-8], attracted beetles.

L41 ANSWER 25 OF 29 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1982:522030 HCAPLUS
DOCUMENT NUMBER: 97:122030
TITLE: Cockroach repellents contained in Japanese mint and Scotch spearmint
AUTHOR(S): Inazuka, Shinichi
CORPORATE SOURCE: Kawasaki Fact., Ajinomoto Co., Kawasaki, 220, Japan
SOURCE: Nippon Noyaku Gakkaishi (1982), 7(2), 145-54
CODEN: NNGADV; ISSN: 0385-1559
DOCUMENT TYPE: Journal
LANGUAGE: Japanese
AB Three olfactory **repellents** toward Blattella germanica and Periplaneta fuliginosa were isolated from oil of Japanese mint (Mentha

arvensis piperascens) and identified as (-)-**limonene** [**5989-54-8**], (-)-**menthol** [**2216-51-5**], and (-)-**menthone** [**14073-97-3**]. Two others were isolated from oil of Scotch spearmint (Mentha **spicata** tenuis) and identified as (-)-carvone [6485-40-1] and (-)-**pulegone** [**3391-90-0**]. Their enantiomers and racemic compds. had very low activities. Relations between **repellency** and the steric configuration of Me, iso-Pr, and isopropenyl groups on the cyclohexane or cyclohexene ring were suggested.

IT **2216-51-5 5989-54-8 14073-97-3**
RL: BIOL (Biological study)
(of Japanese mint oil, as cockroach **repellent**)

IT **3391-90-0**
RL: BIOL (Biological study)
(of Scotch spearmint oil, as cockroach **repellent**)

L41 ANSWER 26 OF 29 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1973:119942 HCAPLUS
DOCUMENT NUMBER: 78:119942
TITLE: Preliminary studies on the effect of soil application of chlorinated insecticides on the amino acid makeup of wheat (Triticum **vulgare**)
AUTHOR(S): Thakre, D. S. K.; Saksena, S. N.
CORPORATE SOURCE: Dep. Soil Sci. Agric. Chem., Coll. Agric., Udaipur, India
SOURCE: Mysore Journal of Agricultural Sciences (1972), 6(4), 466-70
CODEN: MJASAD; ISSN: 0047-8539
DOCUMENT TYPE: Journal
LANGUAGE: English

AB P-p'-DDT (I) [50-29-3], aldrin (II) [309-00-2], endrin [72-20-8], and lindane (III) [58-89-9] (10-30 ppm) stimulated lysine [56-87-1], methionine [63-68-3], and tyrosine [60-18-4] synthesis in wheat. Leucine [**61-90-5**] synthesis was stimulated by I, II, and III only. The content of glutamic acid [56-86-0] plus aspartic acid [56-84-8], glycine [56-40-6] plus serine [56-45-1], and valine [72-18-4] in wheat decreased as a result of these **insecticides**.

IT **61-90-5**, biological studies
RL: FORM (Formation, nonpreparative)
(formation of, by wheat, chlorine-contg. **insecticides** effect on)

L41 ANSWER 27 OF 29 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1968:33131 HCAPLUS
DOCUMENT NUMBER: 68:33131
TITLE: Essential oil of **Foeniculum vulgare**. II. Changes in different fennel oils before and after harvesting
AUTHOR(S): Toth, Laszlo
CORPORATE SOURCE: Tech. Hochsch., Karlsruhe, Fed. Rep. Ger.
SOURCE: Planta Medica (1967), 15(4), 371-89
CODEN: PLMEAA; ISSN: 0032-0943
DOCUMENT TYPE: Journal
LANGUAGE: German

AB The essential oils of the aerial parts of various varieties and strains of F. **vulgare** were studied at various stages of ontogenesis. The compn. of the oils of herb and fruit is principally detd. by genetic factors. However, the amt. of oil in the fruit is much affected by climate and time and conditions of storage of the crude drug material. Essential oil content was highest in the green fruit (F. **vulgare** var **vulgare**) (8.6%) and decreased with ripening (6.2%). This was also noted in extra-fruit parts; thus the umbel rays (without buds, flowers, or fruits) at time of flowering had 1.6% oil, at time of fruiting

0.9%. The "primary oil" of various parts of the plant (flowers, buds, young leaves, stems, roots) showed similar compn., with changes during maturation of the plant. Thus, with F. **vulgare** var **vulgare**, on ripening of fruit, there was a sharp decrease in terpene hydrocarbons (.alpha.-**pinene**, .alpha.-**phellandrene**, **limonene**) but an increase of these compds. in older leaves and stems. The reverse occurred for **fenchone**, estragol, and **anethole**, which increased with ripening in the fruits and decreased in later development of stems and leaves. With F. **vulgare** var dulce, a strong increase of **limonene** and decrease of **anethole** in the older plant parts was noted, .alpha.-**pinene** and .alpha.-**phellandrene** remaining about the same. Indian and Chinese essential oil constituents behaved much as in F. **vulgare** var dulce, except for an increase in **fenchone** in fruit and herb oils and the appearance of 2 new unidentified compds., also found in southern Italian varieties and in tubers of F. **vulgare** var azoricum in which the oil resembles that of young leaves of Indian fennel. In Argentine oil, young fruits contained 21% estragol, which dropped to 10% on ripening, with increase in **anethole**; a similar relation was found in F. **vulgare** var **vulgare**, wild Spanish, and Czechoslovak fennels. Climate had small effect on compn. but was important to percent yields. Cool rainy weather cut the yield by 25%. In the first 10 months of storage, **anethole** and estragol decreased; in 2 years, there was a loss of essential oil in the fruit, going from 6.2% to 4.45%. The essential oil in storage, even at 4.degree., showed a rapid decrease in **anethole** with a relative increase of **fenchone**, estragol, and p-cymol. The oil is O-sensitive due to the high content of **anethole**; hence air should be excluded; light and heat are not important causes of deterioration. Distinction of var **vulgare** and var dulce is possible by gas chromatog. (GC), which is better than thin-layer (TLC), in which distinctions are possibly only in **fenchone**. For TLC, best distinction of spots comes with the use of KMnO4-concd. H2SO4 reagent followed by vanillin-H2SO4. Indian, Chinese, and Japanese oils are not distinguishable from var **vulgare**; var dulce is readily distinguished both by GC and TLC. TLC is also satisfactory for detecting the autoxidn. products of **anethole**: **anisaldehyde**, p-methoxyacetophenone, and 3 other unidentified compds. **Anethole** and estragol could not be sepd. by TLC; only in the completely oxidized oil did estragol appear in place of **anethole** (same Rf position). A TLC biotest was made, using Drosophila melanogaster as test animal. In the ladder-chamber system of TLC, lethal spots appeared at 2 places corresponding to dieldrin and aldrin. These **insecticides** persist as residues a long time in the essential oil following field use of the **insecticides**. **Anethole** is toxic to Drosophila, but not estragol or the **anethole** decompn. products. Two large groups of herb oils can be distinguished which may be used to distinguish strains of the species, viz., **phellandrene** (F. **vulgare** var **vulgare**, Japanese, Argentine, wild Spanish) and **limonene** (F. **vulgare** var dulce, F. **vulgare** var azoricum, Indian, Chinese) plants. It is believed that oil formation is assocd. with protein synthesis. 24 references.

L41 ANSWER 28 OF 29 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER:	1954:37206 HCAPLUS
DOCUMENT NUMBER:	48:37206
ORIGINAL REFERENCE NO.:	48:6655f-i,6656a
TITLE:	Volatile oils. V
AUTHOR(S):	Fester, Gustavo A.; Martinuzzi, Enzo A.; Ricciardi, Armando I.
SOURCE:	Rev. fac. ing. quim. (Santa Fe, Arg.) (1953), Volume Date 1952-1953, 20, 21-22,43-84
DOCUMENT TYPE:	Journal

LANGUAGE: Unavailable

AB cf. C.A. 46, 11586i. Lippia turbinata (poleo) tea is used as a stimulant and diuretic. The principal volatile substance is d-**limonene**, with a trace of cineole. The cinnamon-sandalwood odor that develops in storage was traced to lippione (I), an 8-hydroxy-p-menthadien-2-one not previously described, found in the fraction b. 80-102.degree. and pptd. as the thiosemicarbazone, m. 181.5.degree., and as the phenylsemicarbazone, m. .+-.133.degree.. Hydrolysis of its semicarbazone always produces lippiaphenol (II) (8-hydroxycarvacrol). I is sol. in org. solvents, reduces Fehling soln. and ammoniacal Ag, and is transformed to II by FeCl3 with production of a blackish violet color. It forms only one oxime. The structures of I and II have been accepted, except for the positions of the double bonds. Aloysia ligustrina (palo amarillo, usillo) contains l-**pinene**, eucalyptol, a sesquiterpene, vanillin, and isovaleric acid contg. compds. Acantholippia trifida (tomillo) contains citronellol, **thymol**, and palmitic and isovaleric acid contg. compds. A. seriphioides is used as a stomachic and contains **thymol**. A. hastulata (rica-rica) tea is used as a stomachic and contains thujone, d-isothujone, and thujyl alc. Minthostachys verticillata is the source of the newly discovered peperinic acid (I) (2,2-dihydroxy-.alpha.,4-dimethyl-.DELTA.1,.alpha.-cyclohexaneacetic acid .gamma.-lactone), m. 189.degree., that seps. from the oil on standing 2 years in the cold, and is, therefore, found in liqueurs, confections, perfumes, **insecticides**, and crema de peperina made from the plant. **Satureja** odora (mu.acte.na-mu.acte.na, salvialora) contains **pulegone**, d-isomenthone, lippione, and cedrole. S. parvifolia is used as an aphrodisiac and contains dl-piperitone and an unidentified diosphenol. Chersodoma argentina (salvia de la puna) contains a trace of an oil with the odor of isovaleric acid and what was assumed to be an alc. sesquiterpene with a piperaceous odor. Chenopodium multifidum (paico hembra) yields an oil that is 44-58% ascaridole, with some cymene, **limonene**, camphor, **anethole**, and .beta.-**phellandrene**. Low yields of some of the compds. were attributed to unsatisfactory harvest labor, and to shipping and storage conditions.

L41 ANSWER 29 OF 29 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1933:11201 HCAPLUS
DOCUMENT NUMBER: 27:11201
ORIGINAL REFERENCE NO.: 27:1097h-i
TITLE: Disinfectant
INVENTOR(S): Tabar-Nouval, Joseph M. L.
DOCUMENT TYPE: Patent
LANGUAGE: Unavailable
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
FR 733563		19320316	FR	

AB A disinfectant and **insecticide** contains deodorized petroleum or white spirit 100 l., **thymol** 200 g., camphor 150 g., pyrethrum oil 400 cc., citronella oil 400 cc., oil of thyme 70 cc., oil of mimosa 210 cc., and oil of **origanum** 100 cc.

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=> d stat que 145
L1          841 SEA FILE=REGISTRY ABB=ON  PLU=ON  FENCHOLE OR LAVANDUOL OR
                CHAVICOL OR METHYLINONE OR MYRCENE OR NCROL OR NONANAL OR
                PHELLADRENE OR PULEGONE OR TERMINENE OR TERPENYL OR TEPINENE
                OR TERPINEOL? OR TETRAMETHYLPHENOL OR THUJENE OR THYMIL OR
                TRICYCLENE
L2         4221 SEA FILE=REGISTRY ABB=ON  PLU=ON  LINALOOL OR PINENE OR
                MENTHOL OR MENTHONE OR THYMOL OR METHYLEUGENOL OR EUGENOL   OR
                TERPINEOL OR PHELLANDRENE  OR TERPINENE  OR GERANIOL OR  NEROL
                OR  DECANAL OR MYRCENE OR OCTANAL  OR  NONANAL OR ISOBORNEOL
                OR LIMONENE
L3         9219 SEA FILE=REGISTRY ABB=ON  PLU=ON  ESTRAGOLE OR GERANIAL OR
                FENCHENE OR BISABOLENE OR LAVANDULOL OR TRICYCLENE  OR
                TETRAMETHYLPHENOL OR METHYLPENTAN? OR OCTANOL OR FENCHONE OR
                CIMEN(2A)8(2A)OL OR METHYLIONONE OR FENCHOL OR THUJENE OR
                OCIMENE
L4         1134 SEA FILE=REGISTRY ABB=ON  PLU=ON  SABINENE  OR ANETHOLE OR
                CITRAL OR  CADINENE OR MENTH(2W)2(2W)EN(2W)1(2W)OL OR ANISALDEH
                YDE OR METHOXYPHENYLACETONE CARYOPHYLLENE
L5         2386 SEA FILE=REGISTRY ABB=ON  PLU=ON  (CIS OR TRANS)(2A) ANETHOLE
                OR  ANISALDEHYDE OR ANIS(2A)(ALDEHYDE OR  KETONE) OR BISABOLENE
                 OR  BORNEOL OR (METHOXYPHENYL OR METHOXY(W)PHENYL OR MENTHYL
                OR EUGENYL OR BORNYL OR GERANYL OR LINALYL OR THYMYL)(W)
                ACETATE
L6           56 SEA FILE=REGISTRY ABB=ON  PLU=ON  METHOXYPHENYLACETONE OR
                CARYOPHYLLENE
L7        28510 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L1 OR FENCHOLE OR LAVANDUOL
                OR CHAVICOL OR METHYLINONE OR MYRCENE OR NCROL OR NONANAL OR
                PHELLADRENE OR PULEGONE OR TERMINENE OR TERPENYL OR TEPINENE
                OR TERPINEOL? OR TETRAMETHYLPHENOL OR THUJENE OR THYMIL OR
                TRICYCLENE
L8       184111 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L2 OR LINALOOL OR PINENE OR
                MENTHOL OR MENTHONE OR THYMOL OR METHYLEUGENOL OR EUGENOL   OR
                TERPINEOL OR PHELLANDRENE  OR TERPINENE  OR GERANIOL OR  NEROL
                OR  DECANAL OR MYRCENE OR OCTANAL  OR  NONANAL OR ISOBORNEOL
                OR LIMONENE
L9       132750 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L3 OR ESTRAGOLE OR GERANIAL
                OR FENCHENE OR BISABOLENE OR LAVANDULOL OR TRICYCLENE  OR
                TETRAMETHYLPHENOL OR METHYLPENTAN? OR OCTANOL OR FENCHONE OR
                CIMEN(2A)8(2A)OL OR METHYLIONONE OR FENCHOL OR THUJENE OR
                OCIMENE
L10       54434 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L4 OR SABINENE  OR ANETHOLE
                OR CITRAL OR  CADINENE OR MENTH(2W)2(2W)EN(2W)1(2W)OL OR
                ANISALDEHYDE OR METHOXYPHENYLACETONE CARYOPHYLLENE
L11       57324 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L5 OR (CIS OR TRANS)(2A)
                ANETHOLE OR  ANISALDEHYDE OR ANIS(2A)(ALDEHYDE OR  KETONE) OR
                BISABOLENE OR  BORNEOL OR (METHOXYPHENYL OR METHOXY(W)PHENYL
                OR MENTHYL OR EUGENYL OR BORNYL OR GERANYL OR LINALYL OR
                THYMYL)(W) ACETATE
L12        9259 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L6 OR METHOXYPHENYLACETONE OR
                CARYOPHYLLENE
L13        6790 SEA FILE=REGISTRY ABB=ON  PLU=ON  CADIDENE OR CAMPHENE OR
                CAMPHOR OR CARENE OR CARYOPHYLLENE OR CARVONE OR CARVACROL OR
                CARYOPHYLLENE OR CINNAMIC(W)ALDEHYDE OR CITRAL OR CITRONELLAL
                OR CINEOL OR ANISOLE OR CARYOPHYLLENE OR CINEOLE OR CYMEME
L14      231798 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L13 OR CADIDENE OR CAMPHENE
                OR CAMPHOR OR CARENE OR CARYOPHYLLENE OR CARVONE OR CARVACROL
                OR CARYOPHYLLENE OR CINNAMIC(W)ALDEHYDE OR CITRAL OR CITRONELLA
                L OR CINEOL OR ANISOLE OR CARYOPHYLLENE OR CINEOLE OR CYMEME
L15        7857 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L14 AND (REPEL? INSECTICIDE?
                OR APHICIDE? OR ACARICIDE? OR ANTIBACTERIAL(W) AGENT OR
                FUNGICIDE  OR NEMATOCIDE? OR PESTICIDE? OR TERMITICIDE?)
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L16        1553 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L14 (L)(REPEL? INSECTICIDE?
                OR APHICIDE? OR ACARICIDE? OR ANTIBACTERIAL(W) AGENT OR
                FUNGICIDE  OR NEMATOCIDE? OR PESTICIDE? OR TERMITICIDE?)
L17         750 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L14(L)(LABIATAE OR  UMBELLIFER
                A OR THYMBRA OR  SATUREJA OR ORIGANUM OR  CORYDOTHYMUS OR
                PINPINELLA OR FOENICULUM OR SPICATA OR MAJORANA OR CAPITATUS
                OR VULGARE OR SOLYMICUM OR SPYLEUM OR BILGERI OR MINUTIFLORUM
                OR ACCATUM OR SRIACUM OR ONITES OR ANISUM)
L18          13 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L17 AND L16
L19        1261 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L14 AND (LABIATAE OR
                UMBELLIFERA OR THYMBRA OR  SATUREJA OR ORIGANUM OR  CORYDOTHYMU
                S OR PINPINELLA OR FOENICULUM OR SPICATA OR MAJORANA OR
                CAPITATUS OR VULGARE OR SOLYMICUM OR SPYLEUM OR BILGERI OR
                MINUTIFLORUM OR ACCATUM OR SRIACUM OR ONITES OR ANISUM)
L20         103 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L15 AND L19
L21          90 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L20 NOT L18
L22          30 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L21 AND PD=<OCTOBER 10, 1998
L24        9850 SEA FILE=HCAPLUS ABB=ON  PLU=ON  ?LABIAT? OR ?UMBELLIFER? OR
                LAURUS OR MOBILIS
L25         608 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L24 AND ESSENTIAL OIL
L26          42 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L25 AND (REPEL? INSECTICIDE?
                OR APHICIDE? OR ACARICIDE? OR ANTIBACTERIAL(W) AGENT OR
                FUNGICIDE  OR NEMATOCIDE? OR PESTICIDE? OR TERMITICIDE?)
L27          34 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L26 NOT (L18 OR L22)
L30          80 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L24 AND ?EMULS?
L32          21 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L30 AND (REPEL? OR INSECTICIDE
                ? OR APHICIDE? OR ACARICIDE? OR ANTIBACTERIAL(W) AGENT OR
                FUNGICIDE  OR NEMATOCIDE? OR PESTICIDE? OR TERMITICIDE?)
L33          19 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L32 NOT (L18 OR L22 OR L27)
L39        2930 SEA FILE=HCAPLUS ABB=ON  PLU=ON  (L7 OR L8 OR L9 OR L10 OR L11
                OR L12)(L)(REPEL? OR INSECTICIDE? OR APHICIDE? OR ACARICIDE?
                OR ANTIBACTERIAL(W) AGENT OR FUNGICIDE  OR NEMATOCIDE? OR
                PESTICIDE? OR TERMITICIDE?)
L40          46 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L39 AND (LABIATAE OR
                UMBELLIFERA OR THYMBRA OR  SATUREJA OR ORIGANUM OR  CORYDOTHYMU
                S OR PINPINELLA OR FOENICULUM OR SPICATA OR MAJORANA OR
                CAPITATUS OR VULGARE OR SOLYMICUM OR SPYLEUM OR BILGERI OR
                MINUTIFLORUM OR ACCATUM OR SRIACUM OR ONITES OR ANISUM)
L41          29 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L40 NOT (L18 OR L22 OR L27 OR
                L33)
L42        9172 SEA FILE=HCAPLUS ABB=ON  PLU=ON  (L7 OR L8 OR L9 OR L10 OR L11
                OR L12) AND (REPEL? OR INSECTICIDE? OR APHICIDE? OR ACARICIDE?
                OR ANTIBACTERIAL(W) AGENT OR FUNGICIDE  OR NEMATOCIDE? OR
                PESTICIDE? OR TERMITICIDE?)
L43         130 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L42 AND (LABIATAE OR
                UMBELLIFERA OR THYMBRA OR  SATUREJA OR ORIGANUM OR  CORYDOTHYMU
                S OR PINPINELLA OR FOENICULUM OR SPICATA OR MAJORANA OR
                CAPITATUS OR VULGARE OR SOLYMICUM OR SPYLEUM OR BILGERI OR
                MINUTIFLORUM OR ACCATUM OR SRIACUM OR ONITES OR ANISUM)
L44          48 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L43 NOT (L18 OR L22 OR L27 OR
                L33 OR L41)
L45           5 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L44 AND PD=<OCTOBER 10, 1998


=> d ibib abs hitrn l45 1-5

L45  ANSWER 1 OF 5  HCAPLUS  COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER:         1998:556639  HCAPLUS
DOCUMENT NUMBER:          129:299226
TITLE:                    Insecticidal activity of essential oils on Aedes
                          aegypti larvae
AUTHOR(S):                Chantraine, Jean-Marie; Laurent, Dominique; Ballivian,
                          Carolt; Saavedra, Gloria; Ibanez, Ruben; Vilaseca, L.
```

Antonio
CORPORATE SOURCE: ORSTOM, Cochabamba, Bolivia
SOURCE: Phytotherapy Research (**1998**), 12(5), 350-354
CODEN: PHYREH; ISSN: 0951-418X
PUBLISHER: John Wiley & Sons Ltd.
DOCUMENT TYPE: Journal
LANGUAGE: English
AB The insecticidal activity of essential oils from 52 Bolivian plant species has been evaluated on Aedes aegypti larvae. The active components of essential oils showing an interesting larvicidal effect have been studied. The monoterpenes E-anethol and E-nerolidol were found to be the active principles of the most toxic essential oils. The lethal concns. (LC50 and LC95) of some essential oils, E-anethol, E-nerolidol and a ref. **insecticide** (Temephos) are given.
IT **78-70-6, Linalool 80-56-8**, .alpha.-**Pinene 89-82-7, Pulegone 98-55-5**, .alpha.-**Terpineol 123-35-3**, .beta.-**Myrcene 138-86-3, Limonene 562-74-3**, Terpinen-4-ol **4180-23-8**, (E)-Anethol **40716-66-3**
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(insecticidal activity of components from essential oils on Aedes aegypti larvae)
REFERENCE COUNT: 9 THERE ARE 9 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L45 ANSWER 2 OF 5 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1998:256649 HCAPLUS
DOCUMENT NUMBER: 129:13468
TITLE: Insecticidal and Genotoxic Activities of Oregano Essential Oils. [Erratum to document cited in CA128:189480]
AUTHOR(S): Karpouthis, Ioannis; Pardali, Evagelia; Feggou, Efi; Kokkini, Stella; Scouras, Zacharias G.; Mavrgani-Tsipidou, Penelope
CORPORATE SOURCE: Department of Genetics Development and Molecular Biology and Laboratory of Systematic Botany and Phytogeography School of Biology, Faculty of Science Aristotle University of Thessaloniki, Thessaloniki, GR-54006, Greece
SOURCE: Journal of Agricultural and Food Chemistry (**1998**), 46(4), 1694
CODEN: JAFCAU; ISSN: 0021-8561
PUBLISHER: American Chemical Society
DOCUMENT TYPE: Journal
LANGUAGE: English
AB The genetic constitution of the flare strain (under Materials and Methods, Genetic System) should read y wco/y wco.
IT **89-83-8, Thymol 99-85-4**, .gamma.-**Terpinene 499-75-2**, Carvacrol
RL: ADV (Adverse effect, including toxicity); BOC (Biological occurrence); BSU (Biological study, unclassified); BUU (Biological use, unclassified); BIOL (Biological study); OCCU (Occurrence); USES (Uses)
(insecticidal and genotoxic component of oregano essential oils (Erratum))

L45 ANSWER 3 OF 5 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1996:528906 HCAPLUS
DOCUMENT NUMBER: 125:299509
TITLE: Microbial transformation of monoterpenes: flavor and biological activity
AUTHOR(S): Nishimura, Hiroyuki; Noma, Yoshiaki

CORPORATE SOURCE: Dep. Biosci. Technol., Hokkaido Tokai Univ., Sapporo, 005, Japan
SOURCE: ACS Symposium Series (**1996**), 637(Biotechnology for Improved Foods and Flavors), 173-187
CODEN: ACSMC8; ISSN: 0097-6156
PUBLISHER: American Chemical Society
DOCUMENT TYPE: Journal; General Review
LANGUAGE: English

AB A review with 25 refs. of the author's research which may contain some new data. Microbial transformation of (-)-carvone in Mentha **spicata** and 1,8-cineole in Eucalyptus species was studied from the viewpoint of the flavor and biol. activities. (-)-Cis-Carveol, one of products biotransformed from (-)-carvone, was transformed by Streptomyces bottropensis to produce a novel compd., (+)-bottrospicatol which exhibits the germination inhibitory activity against plant seeds. Furthermore, 1,8-cineole was transformed by a strain of Aspergillus niger to produce 3-hydroxycineoles. Hydrogenolysis of 3-hydroxycineoles afforded p-menthane-3,8-dioles (cis and trans) which exhibits **repellent** activity against mosquitoes. The flavor of microbial transformation products was evaluated. There is a growing interest among biochemists in the microbial transformation of natural products in terms of the prodn. of economically useful chems. In connection with effective utilization of terpenoids which are major constituents in higher plants, the microbial transformation of (-)-carvone (ca. 70% content) in Mentha **spicata** oil and 1,8-cineole (40-70% content) in Eucalyptus oils has been investigated from viewpoint of the flavor and biol. activities.

IT **3564-95-2**
RL: BSU (Biological study, unclassified); MFM (Metabolic formation); BIOL (Biological study); FORM (Formation, nonpreparative)
(microbial transformation of monoterpenes: flavor and biol. activity)

L45 ANSWER 4 OF 5 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1993:511248 HCAPLUS
DOCUMENT NUMBER: 119:111248
TITLE: Insecticidal effect of essential oils from Mediterranean plants on Acanthoscelides obtectus Say (Coleoptera, Bruchidae), a pest of kidney bean (Phaseolus vulgaris L.)
AUTHOR(S): Regnault-Roger, Catherine; Hamraoui, A.; Holeman, M.; Theron, E.; Pinel, R.
CORPORATE SOURCE: IBEAS, Univ. Pau et des Pays de l'Adour, Pau, F-64000, Fr.
SOURCE: Journal of Chemical Ecology (**1993**), 19(6), 1233-44
CODEN: JCECD8; ISSN: 0098-0331
DOCUMENT TYPE: Journal
LANGUAGE: English

AB The bioactivity of 22 essential oils from arom. and medicinal plants was tested upon A. obtectus (Coleoptera, Bruchidae), a pest of kidney bean (P. vulgaris). The insecticidal effect was evaluated by detn. of 24- and 48-h LC50 and LC50 (from 1.50 mg/dm3 to >1000 mg/dm3). Isoprenoids and phenylpropanoids were identified by gas chromatog. The most efficient essential oils were extd. from plants belonging to Labiate. **Origanum** marjorana and Thymus serpyllum essential oils were the most toxic.

IT **78-70-6, Linalool 80-56-8, .alpha.-Pinene 87-44-5 89-80-5, Menthone 89-83-8, Thymol 97-53-0 98-55-5, .alpha.-Terpineol 99-85-4, .gamma.-Terpinene 106-23-0,** Citronellal **106-24-1, Geraniol 115-95-7, Linalyl acetate 123-35-3 127-91-3 138-86-3 491-07-6,** Isomenthone

499-75-2, Carvacrol **507-70-0**, **Borneol**
555-10-2, .beta.-**Phellandrene** **562-74-3**
1490-04-6, **Menthol** **3387-41-5**, **Sabinene**
6753-98-6
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BIOL (Biological study)
(insecticidal activity of essential oils from Mediterranean plants against Acanthoscelides obtectus in relation to)

L45 ANSWER 5 OF 5 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1991:183972 HCAPLUS
DOCUMENT NUMBER: 114:183972
TITLE: Fumigant toxicity of essential oils against four major stored-product insects
AUTHOR(S): Shaaya, Eli; Ravid, Uzi; Paster, Nachman; Juven, Benjamin; Zisman, Uzi; Pissarev, Vladimir
CORPORATE SOURCE: Dep. Stored Prod., ARO, Bet Dagan, 50250, India
SOURCE: Journal of Chemical Ecology (**1991**), 17(3), 499-504
CODEN: JCECD8; ISSN: 0098-0331
DOCUMENT TYPE: Journal
LANGUAGE: English
AB The fumigant toxicity of 28 essential oils extd. from various spice and herb plants and some of their major constituents were assessed for adult coleopterans Rhyzopertha dominica, Oryzaephilus surinamensis, Tribolium castaneum, and Sitophilus oryzae. Three groups of active materials were distinguished: (1) The compds. terpinen 4-ol, 1,8-cineole, and the essential oils of three-lobed sage, sage, bay laurel, rosemary, and lavender were most active against R. dominica; (2) The compds. **linalool**, .alpha.-**terpineol**, and carvacrol and the essential oils of organo, basil, Syrian marjoram, and thyme were most active against O. surinamensis; and (3) the compd. 1,8-cineole and the essential oils anise and peppermint were active against T. castaneum.
IT **78-70-6**, **Linalool** **98-55-5**, .alpha.-**Terpineol** **499-75-2**, Carvacrol **562-74-3**, Terpinen 4-ol
RL: BIOL (Biological study)
(as fumigants against stored-product insects)

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=> fil hcaplus
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FILE LAST UPDATED: 22 Apr 2004  (20040422/ED)

 This file contains CAS Registry Numbers for easy and accurate
 substance identification.


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=> d stat que
L1          841 SEA FILE=REGISTRY ABB=ON  PLU=ON  FENCHOLE OR LAVANDUOL OR
                CHAVICOL OR METHYLINONE OR MYRCENE OR NCROL OR NONANAL OR
                PHELLADRENE OR PULEGONE OR TERMINENE OR TERPENYL OR TEPINENE
                OR TERPINEOL? OR TETRAMETHYLPHENOL OR THUJENE OR THYMIL OR
                TRICYCLENE
L2         4221 SEA FILE=REGISTRY ABB=ON  PLU=ON  LINALOOL OR PINENE OR
                MENTHOL OR MENTHONE OR THYMOL OR METHYLEUGENOL OR EUGENOL  OR
                TERPINEOL OR PHELLANDRENE  OR TERPINENE  OR GERANIOL OR  NEROL
                OR  DECANAL OR MYRCENE OR OCTANAL  OR  NONANAL OR ISOBORNEOL
                OR LIMONENE
L3         9219 SEA FILE=REGISTRY ABB=ON  PLU=ON  ESTRAGOLE OR GERANIAL OR
                FENCHENE OR BISABOLENE OR LAVANDULOL OR TRICYCLENE  OR
                TETRAMETHYLPHENOL OR METHYLPENTAN? OR OCTANOL OR FENCHONE OR
                CIMEN(2A)8(2A)OL OR METHYLIONONE OR FENCHOL OR THUJENE OR
                OCIMENE
L4         1134 SEA FILE=REGISTRY ABB=ON  PLU=ON  SABINENE  OR ANETHOLE OR
                CITRAL OR  CADINENE OR MENTH(2W)2(2W)EN(2W)1(2W)OL OR ANISALDEH
                YDE OR METHOXYPHENYLACETONE CARYOPHYLLENE
L5         2386 SEA FILE=REGISTRY ABB=ON  PLU=ON  (CIS OR TRANS)(2A) ANETHOLE
                OR  ANISALDEHYDE OR ANIS(2A)(ALDEHYDE OR  KETONE) OR BISABOLENE
                 OR  BORNEOL OR (METHOXYPHENYL OR METHOXY(W)PHENYL OR MENTHYL
                OR EUGENYL OR BORNYL OR GERANYL OR LINALYL OR THYMYL)(W)
                ACETATE
L6           56 SEA FILE=REGISTRY ABB=ON  PLU=ON  METHOXYPHENYLACETONE OR
                CARYOPHYLLENE
L7        28510 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L1 OR FENCHOLE OR LAVANDUOL
                OR CHAVICOL OR METHYLINONE OR MYRCENE OR NCROL OR NONANAL OR
                PHELLADRENE OR PULEGONE OR TERMINENE OR TERPENYL OR TEPINENE
                OR TERPINEOL? OR TETRAMETHYLPHENOL OR THUJENE OR THYMIL OR
                TRICYCLENE
L8       184111 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L2 OR LINALOOL OR PINENE OR
                MENTHOL OR MENTHONE OR THYMOL OR METHYLEUGENOL OR EUGENOL  OR
                TERPINEOL OR PHELLANDRENE  OR TERPINENE  OR GERANIOL OR  NEROL
                OR  DECANAL OR MYRCENE OR OCTANAL  OR  NONANAL OR ISOBORNEOL
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OR LIMONENE

L9 132750 SEA FILE=HCAPLUS ABB=ON PLU=ON L3 OR ESTRAGOLE OR GERANIAL OR FENCHENE OR BISABOLENE OR LAVANDULOL OR TRICYCLENE OR TETRAMETHYLPHENOL OR METHYLPENTAN? OR OCTANOL OR FENCHONE OR CIMEN(2A)8(2A)OL OR METHYLIONONE OR FENCHOL OR THUJENE OR OCIMENE

L10 54434 SEA FILE=HCAPLUS ABB=ON PLU=ON L4 OR SABINENE OR ANETHOLE OR CITRAL OR CADINENE OR MENTH(2W)2(2W)EN(2W)1(2W)OL OR ANISALDEHYDE OR METHOXYPHENYLACETONE CARYOPHYLLENE

L11 57324 SEA FILE=HCAPLUS ABB=ON PLU=ON L5 OR (CIS OR TRANS)(2A) ANETHOLE OR ANISALDEHYDE OR ANIS(2A)(ALDEHYDE OR KETONE) OR BISABOLENE OR BORNEOL OR (METHOXYPHENYL OR METHOXY(W)PHENYL OR MENTHYL OR EUGENYL OR BORNYL OR GERANYL OR LINALYL OR THYMYL)(W) ACETATE

L12 9259 SEA FILE=HCAPLUS ABB=ON PLU=ON L6 OR METHOXYPHENYLACETONE OR CARYOPHYLLENE

L13 6790 SEA FILE=REGISTRY ABB=ON PLU=ON CADIDENE OR CAMPHENE OR CAMPHOR OR CARENE OR CARYOPHYLLENE OR CARVONE OR CARVACROL OR CARYOPHYLLENE OR CINNAMIC(W)ALDEHYDE OR CITRAL OR CITRONELLAL OR CINEOL OR ANISOLE OR CARYOPHYLLENE OR CINEOLE OR CYMEME

L14 231798 SEA FILE=HCAPLUS ABB=ON PLU=ON L13 OR CADIDENE OR CAMPHENE OR CAMPHOR OR CARENE OR CARYOPHYLLENE OR CARVONE OR CARVACROL OR CARYOPHYLLENE OR CINNAMIC(W)ALDEHYDE OR CITRAL OR CITRONELLAL OR CINEOL OR ANISOLE OR CARYOPHYLLENE OR CINEOLE OR CYMEME

L15 7857 SEA FILE=HCAPLUS ABB=ON PLU=ON L14 AND (REPEL? INSECTICIDE? OR APHICIDE? OR ACARICIDE? OR ANTIBACTERIAL(W) AGENT OR FUNGICIDE OR NEMATOCIDE? OR PESTICIDE? OR TERMITICIDE?)

L16 1553 SEA FILE=HCAPLUS ABB=ON PLU=ON L14 (L)(REPEL? INSECTICIDE? OR APHICIDE? OR ACARICIDE? OR ANTIBACTERIAL(W) AGENT OR FUNGICIDE OR NEMATOCIDE? OR PESTICIDE? OR TERMITICIDE?)

L17 750 SEA FILE=HCAPLUS ABB=ON PLU=ON L14(L)(LABIATAE OR UMBELLIFERA OR THYMBRA OR SATUREJA OR ORIGANUM OR CORYDOTHYMUS OR PINPINELLA OR FOENICULUM OR SPICATA OR MAJORANA OR CAPITATUS OR VULGARE OR SOLYMICUM OR SPYLEUM OR BILGERI OR MINUTIFLORUM OR ACCATUM OR SRIACUM OR ONITES OR ANISUM)

L18 13 SEA FILE=HCAPLUS ABB=ON PLU=ON L17 AND L16

L19 1261 SEA FILE=HCAPLUS ABB=ON PLU=ON L14 AND (LABIATAE OR UMBELLIFERA OR THYMBRA OR SATUREJA OR ORIGANUM OR CORYDOTHYMUS OR PINPINELLA OR FOENICULUM OR SPICATA OR MAJORANA OR CAPITATUS OR VULGARE OR SOLYMICUM OR SPYLEUM OR BILGERI OR MINUTIFLORUM OR ACCATUM OR SRIACUM OR ONITES OR ANISUM)

L20 103 SEA FILE=HCAPLUS ABB=ON PLU=ON L15 AND L19

L21 90 SEA FILE=HCAPLUS ABB=ON PLU=ON L20 NOT L18

L22 30 SEA FILE=HCAPLUS ABB=ON PLU=ON L21 AND PD=<OCTOBER 10, 1998

L24 9850 SEA FILE=HCAPLUS ABB=ON PLU=ON ?LABIAT? OR ?UMBELLIFER? OR LAURUS OR MOBILIS

L25 608 SEA FILE=HCAPLUS ABB=ON PLU=ON L24 AND ESSENTIAL OIL

L26 42 SEA FILE=HCAPLUS ABB=ON PLU=ON L25 AND (REPEL? INSECTICIDE? OR APHICIDE? OR ACARICIDE? OR ANTIBACTERIAL(W) AGENT OR FUNGICIDE OR NEMATOCIDE? OR PESTICIDE? OR TERMITICIDE?)

L27 34 SEA FILE=HCAPLUS ABB=ON PLU=ON L26 NOT (L18 OR L22)

L30 80 SEA FILE=HCAPLUS ABB=ON PLU=ON L24 AND ?EMULS?

L32 21 SEA FILE=HCAPLUS ABB=ON PLU=ON L30 AND (REPEL? OR INSECTICIDE? OR APHICIDE? OR ACARICIDE? OR ANTIBACTERIAL(W) AGENT OR FUNGICIDE OR NEMATOCIDE? OR PESTICIDE? OR TERMITICIDE?)

L33 19 SEA FILE=HCAPLUS ABB=ON PLU=ON L32 NOT (L18 OR L22 OR L27)

L37 12006 SEA FILE=HCAPLUS ABB=ON PLU=ON 1000(W)PPM

L39 2930 SEA FILE=HCAPLUS ABB=ON PLU=ON (L7 OR L8 OR L9 OR L10 OR L11 OR L12)(L)(REPEL? OR INSECTICIDE? OR APHICIDE? OR ACARICIDE? OR ANTIBACTERIAL(W) AGENT OR FUNGICIDE OR NEMATOCIDE? OR PESTICIDE? OR TERMITICIDE?)

L40 46 SEA FILE=HCAPLUS ABB=ON PLU=ON L39 AND (LABIATAE OR UMBELLIFERA OR THYMBRA OR SATUREJA OR ORIGANUM OR CORYDOTHYMU

S OR PINPINELLA OR FOENICULUM OR SPICATA OR MAJORANA OR CAPITATUS OR VULGARE OR SOLYMICUM OR SPYLEUM OR BILGERI OR MINUTIFLORUM OR ACCATUM OR SRIACUM OR ONITES OR ANISUM)

L41 29 SEA FILE=HCAPLUS ABB=ON PLU=ON L40 NOT (L18 OR L22 OR L27 OR L33)

L46 350 SEA FILE=HCAPLUS ABB=ON PLU=ON L37 AND (L7 OR L8 OR L9 OR L10 OR L11 OR L12 OR L14)

L47 2 SEA FILE=HCAPLUS ABB=ON PLU=ON L46 AND (LABIATAE OR UMBELLIFERA OR THYMBRA OR SATUREJA OR ORIGANUM OR CORYDOTHYMUS OR PINPINELLA OR FOENICULUM OR SPICATA OR MAJORANA OR CAPITATUS OR VULGARE OR SOLYMICUM OR SPYLEUM OR BILGERI OR MINUTIFLORUM OR ACCATUM OR SRIACUM OR ONITES OR ANISUM)

L48 2 SEA FILE=HCAPLUS ABB=ON PLU=ON L47 NOT (L18 OR L22 OR L27 OR L33 OR L41)

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=> d ibib abs hitrn 148 1-2

L48 ANSWER 1 OF 2 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1998:145670 HCAPLUS
DOCUMENT NUMBER: 128:216582
TITLE: Comparative flavor release profiles from oregano (**Origanum** virens) formulated into powdered materials
AUTHOR(S): Ferreira, Paulo M.; Empis, Jose A.; Bernardo-Gil, M. Gabriela
CORPORATE SOURCE: Dep. de Engenharia Quimica, Instituto Superior Tecnico, Lisbon, 1096, Port.
SOURCE: Current Status and Future Trends in Analytical Food Chemistry, Proceedings of the European Conference on Food Chemistry, 8th, Vienna, Sept. 18-20, 1995 (1995), Volume 2, 333-336. Editor(s): Sontag, Gerhard; Pfannhauser, Werner. Austrian Chemical Society: Vienna, Austria.
CODEN: 65SOA5
DOCUMENT TYPE: Conference
LANGUAGE: English

AB The comparative release of the essential oil of oregano previously incorporated into two different materials was studied. Materials used as vehicles/encapsulating agents were starch and a lupine flour obtained as residue from the manuf. of lupine protein isolate. Headspace chromatog. of the dispersions of the flavorants in the powder was used to compare flavor release behavior. Flavor was initially added to the powd. supports and equilibrated at room temp. in airtight sealed containers at 500 and **1000 ppm.** For anal. purposes, conditioning at 37, 50 and 70.degree.C was performed maintaining ERH conditions in order to roughly simulate the conditions encountered during processing and intake. Flavor profiles were compared with those obtained in GC spectra of the pure essential oil.

IT **78-70-6, Linalool 79-92-5, Camphene 80-56-8, .alpha.-Pinene 87-44-5, Caryophyllene 89-83-8, Thymol 99-83-2, .alpha.-Phellandrene 99-85-4, .gamma.-Terpinene 123-35-3, Myrcene 127-91-3, .beta.-Pinene 138-86-3, Limonene 470-67-7, 1,4-Cineole 499-75-2, Carvacrol 562-74-3,** Terpinen-4-ol **586-62-9,** Terpinolene **586-82-3,** Terpinen-1-ol **2867-05-2, .alpha.-Thujene 3387-41-5, Sabinene 8000-41-7, Terpineol**

RL: BOC (Biological occurrence); BSU (Biological study, unclassified); PEP (Physical, engineering or chemical process); BIOL (Biological study); OCCU (Occurrence); PROC (Process)
(comparative flavor release profiles from oregano (**Origanum** virens) formulated into powd. materials)
REFERENCE COUNT: 2 THERE ARE 2 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L48 ANSWER 2 OF 2 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1994:501800 HCAPLUS
DOCUMENT NUMBER: 121:101800
TITLE: an in vitro evaluation of botanical compounds for the control of the honeybee pathogens Bacillus larvae and Ascosphaera apis, and the secondary invader B. alvei
AUTHOR(S): Calderone, Nicholas W.; Shimanuki, Hachiro; Allen-Wardell, Gordon
CORPORATE SOURCE: Bee Res. Lab., USDA, Beltsville, MD, 20705, USA
SOURCE: Journal of Essential Oil Research (1994), 6(3), 279-87
CODEN: JEOREG; ISSN: 1041-2905
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Bactericidal and fungicidal effects of eight plant exts. on the growth of two honeybee pathogens, Bacillus larvae (causative agent of American foulbrood) and Ascosphaera apis (causative agent of chalkbrood), and Bacillus alvei (a secondary invader in European foulbrood), were evaluated. Cinnamon oil completely inhibited the growth of B. larvae at 10 ppm for 72 h. **Camphor** and **citronellal** inhibited all growth at 100 ppm for 72 h. Bay oil, clove oil, **origanum** oil, and **thymol** inhibited all growth at **1000 ppm** for 72h, and .alpha.-**terpinene** inhibited all growth at 10,000 ppm for 72h. Cinnamon oil completely inhibited the growth of A. apis at 100 ppm for 168 h. Bay oil, **citronellal**, clove oil, **origanum** oil and **thymol** inhibited all growth at 1,000 ppm for 168 h. **Camphor** inhibited all growth at 10,000 ppm for 168 h, and .alpha.-**terpinene** inhibited all growth for 72 h at 10,000 ppm. Cinnamon oil and **thymol** completely inhibited the growth of B. alvei at 10 ppm for 72 h. Bay oil, **camphor** and **origanum** oil inhibited all growth at 100 ppm for 72 h. Clove oil and **citronellal** inhibited all growth at **1000 ppm** for 72 h, and .alpha.-**terpinene** inhibited growth at 10,000 ppm for 72 h. Several compds. reduced growth in a dose dependent manner at levels below their threshold values. Thus, plant exts. might play a significant role in the management of honeybee diseases.
IT **76-22-2, Camphor 89-83-8, Thymol 99-86-5, .alpha.-Terpinene 106-23-0, Citronellal**
RL: BIOL (Biological study)
(in control of honeybee diseases)

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=> d stat que
L1          841 SEA FILE=REGISTRY ABB=ON  PLU=ON  FENCHOLE OR LAVANDUOL OR
                CHAVICOL OR METHYLINONE OR MYRCENE OR NCROL OR NONANAL OR
                PHELLADRENE OR PULEGONE OR TERMINENE OR TERPENYL OR TEPINENE
                OR TERPINEOL? OR TETRAMETHYLPHENOL OR THUJENE OR THYMIL OR
                TRICYCLENE
L2         4221 SEA FILE=REGISTRY ABB=ON  PLU=ON  LINALOOL OR PINENE OR
                MENTHOL OR MENTHONE OR THYMOL OR METHYLEUGENOL OR EUGENOL  OR
                TERPINEOL OR PHELLANDRENE  OR TERPINENE  OR GERANIOL OR  NEROL
                OR  DECANAL OR MYRCENE OR OCTANAL  OR  NONANAL OR ISOBORNEOL
                OR LIMONENE
L3         9219 SEA FILE=REGISTRY ABB=ON  PLU=ON  ESTRAGOLE OR GERANIAL OR
                FENCHENE OR BISABOLENE OR LAVANDULOL OR TRICYCLENE  OR
                TETRAMETHYLPHENOL OR METHYLPENTAN? OR OCTANOL OR FENCHONE OR
                CIMEN(2A)8(2A)OL OR METHYLIONONE OR FENCHOL OR THUJENE OR
                OCIMENE
L4         1134 SEA FILE=REGISTRY ABB=ON  PLU=ON  SABINENE  OR ANETHOLE OR
                CITRAL OR  CADINENE OR MENTH(2W)2(2W)EN(2W)1(2W)OL OR ANISALDEH
                YDE OR METHOXYPHENYLACETONE CARYOPHYLLENE
L5         2386 SEA FILE=REGISTRY ABB=ON  PLU=ON  (CIS OR TRANS)(2A) ANETHOLE
                OR  ANISALDEHYDE OR ANIS(2A)(ALDEHYDE OR  KETONE) OR BISABOLENE
                 OR  BORNEOL OR (METHOXYPHENYL OR METHOXY(W)PHENYL OR MENTHYL
                OR EUGENYL OR BORNYL OR GERANYL OR LINALYL OR THYMYL)(W)
                ACETATE
L6           56 SEA FILE=REGISTRY ABB=ON  PLU=ON  METHOXYPHENYLACETONE OR
                CARYOPHYLLENE
L7        28510 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L1 OR FENCHOLE OR LAVANDUOL
                OR CHAVICOL OR METHYLINONE OR MYRCENE OR NCROL OR NONANAL OR
                PHELLADRENE OR PULEGONE OR TERMINENE OR TERPENYL OR TEPINENE
                OR TERPINEOL? OR TETRAMETHYLPHENOL OR THUJENE OR THYMIL OR
                TRICYCLENE
L8       184111 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L2 OR LINALOOL OR PINENE OR
                MENTHOL OR MENTHONE OR THYMOL OR METHYLEUGENOL OR EUGENOL  OR
                TERPINEOL OR PHELLANDRENE  OR TERPINENE  OR GERANIOL OR  NEROL
                OR  DECANAL OR MYRCENE OR OCTANAL  OR  NONANAL OR ISOBORNEOL
                OR LIMONENE
L9       132750 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L3 OR ESTRAGOLE OR GERANIAL
                OR FENCHENE OR BISABOLENE OR LAVANDULOL OR TRICYCLENE  OR
                TETRAMETHYLPHENOL OR METHYLPENTAN? OR OCTANOL OR FENCHONE OR
                CIMEN(2A)8(2A)OL OR METHYLIONONE OR FENCHOL OR THUJENE OR
                OCIMENE
L10       54434 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L4 OR SABINENE  OR ANETHOLE
                OR CITRAL OR  CADINENE OR MENTH(2W)2(2W)EN(2W)1(2W)OL OR
                ANISALDEHYDE OR METHOXYPHENYLACETONE CARYOPHYLLENE
L11       57324 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L5 OR (CIS OR TRANS)(2A)
                ANETHOLE OR  ANISALDEHYDE OR ANIS(2A)(ALDEHYDE OR  KETONE) OR
                BISABOLENE OR  BORNEOL OR (METHOXYPHENYL OR METHOXY(W)PHENYL
                OR MENTHYL OR EUGENYL OR BORNYL OR GERANYL OR LINALYL OR
                THYMYL)(W) ACETATE
L12        9259 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L6 OR METHOXYPHENYLACETONE OR
                CARYOPHYLLENE
L13        6790 SEA FILE=REGISTRY ABB=ON  PLU=ON  CADIDENE OR CAMPHENE OR
                CAMPHOR OR CARENE OR CARYOPHYLLENE OR CARVONE OR CARVACROL OR
                CARYOPHYLLENE OR CINNAMIC(W)ALDEHYDE OR CITRAL OR CITRONELLAL
                OR CINEOL OR ANISOLE OR CARYOPHYLLENE OR CINEOLE OR CYMEME
L14      231798 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L13 OR CADIDENE OR CAMPHENE
                OR CAMPHOR OR CARENE OR CARYOPHYLLENE OR CARVONE OR CARVACROL
                OR CARYOPHYLLENE OR CINNAMIC(W)ALDEHYDE OR CITRAL OR CITRONELLA
                L OR CINEOL OR ANISOLE OR CARYOPHYLLENE OR CINEOLE OR CYMEME
L15        7857 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L14 AND (REPEL? INSECTICIDE?
                OR APHICIDE? OR ACARICIDE? OR ANTIBACTERIAL(W) AGENT OR
                FUNGICIDE  OR NEMATOCIDE? OR PESTICIDE? OR TERMITICIDE?)
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L16 1553 SEA FILE=HCAPLUS ABB=ON PLU=ON L14 (L)(REPEL? INSECTICIDE? OR APHICIDE? OR ACARICIDE? OR ANTIBACTERIAL(W) AGENT OR FUNGICIDE OR NEMATOCIDE? OR PESTICIDE? OR TERMITICIDE?)

L17 750 SEA FILE=HCAPLUS ABB=ON PLU=ON L14(L)(LABIATAE OR UMBELLIFERA OR THYMBRA OR SATUREJA OR ORIGANUM OR CORYDOTHYMUS OR PINPINELLA OR FOENICULUM OR SPICATA OR MAJORANA OR CAPITATUS OR VULGARE OR SOLYMICUM OR SPYLEUM OR BILGERI OR MINUTIFLORUM OR ACCATUM OR SRIACUM OR ONITES OR ANISUM)

L18 13 SEA FILE=HCAPLUS ABB=ON PLU=ON L17 AND L16

L19 1261 SEA FILE=HCAPLUS ABB=ON PLU=ON L14 AND (LABIATAE OR UMBELLIFERA OR THYMBRA OR SATUREJA OR ORIGANUM OR CORYDOTHYMUS OR PINPINELLA OR FOENICULUM OR SPICATA OR MAJORANA OR CAPITATUS OR VULGARE OR SOLYMICUM OR SPYLEUM OR BILGERI OR MINUTIFLORUM OR ACCATUM OR SRIACUM OR ONITES OR ANISUM)

L20 103 SEA FILE=HCAPLUS ABB=ON PLU=ON L15 AND L19

L21 90 SEA FILE=HCAPLUS ABB=ON PLU=ON L20 NOT L18

L22 30 SEA FILE=HCAPLUS ABB=ON PLU=ON L21 AND PD=<OCTOBER 10, 1998

L24 9850 SEA FILE=HCAPLUS ABB=ON PLU=ON ?LABIAT? OR ?UMBELLIFER? OR LAURUS OR MOBILIS

L25 608 SEA FILE=HCAPLUS ABB=ON PLU=ON L24 AND ESSENTIAL OIL

L26 42 SEA FILE=HCAPLUS ABB=ON PLU=ON L25 AND (REPEL? INSECTICIDE? OR APHICIDE? OR ACARICIDE? OR ANTIBACTERIAL(W) AGENT OR FUNGICIDE OR NEMATOCIDE? OR PESTICIDE? OR TERMITICIDE?)

L27 34 SEA FILE=HCAPLUS ABB=ON PLU=ON L26 NOT (L18 OR L22)

L30 80 SEA FILE=HCAPLUS ABB=ON PLU=ON L24 AND ?EMULS?

L32 21 SEA FILE=HCAPLUS ABB=ON PLU=ON L30 AND (REPEL? OR INSECTICIDE? OR APHICIDE? OR ACARICIDE? OR ANTIBACTERIAL(W) AGENT OR FUNGICIDE OR NEMATOCIDE? OR PESTICIDE? OR TERMITICIDE?)

L33 19 SEA FILE=HCAPLUS ABB=ON PLU=ON L32 NOT (L18 OR L22 OR L27)

L37 12006 SEA FILE=HCAPLUS ABB=ON PLU=ON 1000(W)PPM

L39 2930 SEA FILE=HCAPLUS ABB=ON PLU=ON (L7 OR L8 OR L9 OR L10 OR L11 OR L12)(L)(REPEL? OR INSECTICIDE? OR APHICIDE? OR ACARICIDE? OR ANTIBACTERIAL(W) AGENT OR FUNGICIDE OR NEMATOCIDE? OR PESTICIDE? OR TERMITICIDE?)

L40 46 SEA FILE=HCAPLUS ABB=ON PLU=ON L39 AND (LABIATAE OR UMBELLIFERA OR THYMBRA OR SATUREJA OR ORIGANUM OR CORYDOTHYMUS OR PINPINELLA OR FOENICULUM OR SPICATA OR MAJORANA OR CAPITATUS OR VULGARE OR SOLYMICUM OR SPYLEUM OR BILGERI OR MINUTIFLORUM OR ACCATUM OR SRIACUM OR ONITES OR ANISUM)

L41 29 SEA FILE=HCAPLUS ABB=ON PLU=ON L40 NOT (L18 OR L22 OR L27 OR L33)

L46 350 SEA FILE=HCAPLUS ABB=ON PLU=ON L37 AND (L7 OR L8 OR L9 OR L10 OR L11 OR L12 OR L14)

L47 2 SEA FILE=HCAPLUS ABB=ON PLU=ON L46 AND (LABIATAE OR UMBELLIFERA OR THYMBRA OR SATUREJA OR ORIGANUM OR CORYDOTHYMUS OR PINPINELLA OR FOENICULUM OR SPICATA OR MAJORANA OR CAPITATUS OR VULGARE OR SOLYMICUM OR SPYLEUM OR BILGERI OR MINUTIFLORUM OR ACCATUM OR SRIACUM OR ONITES OR ANISUM)

L48 2 SEA FILE=HCAPLUS ABB=ON PLU=ON L47 NOT (L18 OR L22 OR L27 OR L33 OR L41)

L49 231273 SEA FILE=HCAPLUS ABB=ON PLU=ON PPM

L50 5779 SEA FILE=HCAPLUS ABB=ON PLU=ON L49 AND (L7 OR L8 OR L9 OR L10 OR L11 OR L12 OR L14)

L51 25 SEA FILE=HCAPLUS ABB=ON PLU=ON L50 AND (LABIATAE OR UMBELLIFERA OR THYMBRA OR SATUREJA OR ORIGANUM OR CORYDOTHYMUS OR PINPINELLA OR FOENICULUM OR SPICATA OR MAJORANA OR CAPITATUS OR VULGARE OR SOLYMICUM OR SPYLEUM OR BILGERI OR MINUTIFLORUM OR ACCATUM OR SRIACUM OR ONITES OR ANISUM)

L52 17 SEA FILE=HCAPLUS ABB=ON PLU=ON L51 NOT (L18 OR L22 OR L27 OR L33 OR L41 OR L48)

L53 6 SEA FILE=HCAPLUS ABB=ON PLU=ON L52 AND PD=<OCTOBER 10, 1998

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=> d ibib abs hitrn l53 1-6

L53 ANSWER 1 OF 6 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1992:39704 HCAPLUS
DOCUMENT NUMBER: 116:39704
TITLE: Production of giant hyssop oil by plant tissue culture
AUTHOR(S): Shin, Soon Hee; Kim, Hae Kyung; Chi, Hyung Joon
CORPORATE SOURCE: Coll. Pharm., Duksung Women's Univ., Seoul, 132-714, S. Korea
SOURCE: Saengyak Hakhoechi (**1991**), 22(2), 91-4
CODEN: SYHJAM; ISSN: 0253-3073
DOCUMENT TYPE: Journal
LANGUAGE: Korean
AB Callus was derived from the seedlings of Agastache rugosa (**Labiatae**). The growth rate of callus and the prodn. of essential oil were studied with the variation of culturing conditions. 2,4-D 2 **ppm** in the medium was more effective for the prodn. of essential oil than NAA 2 **ppm**. The growth rate of callus and the prodn. of essential oil were inhibited by the illumination of the light. The essential oils from Agastache rugosa and the callus cultivated on the medium contg. 2,4-D 2 **ppm** and kinetin 0.2 **ppm** were analyzed by TLC, gas chromatog. and mass spectrometry. These two oils showed different compns. The main component of the plant oil, Me **chavicol**, was not contained in the callus oil.
IT **140-67-0**, Methyl **chavicol**
RL: BIOL (Biological study)
(of essential oil, from Agastache rugosa)

L53 ANSWER 2 OF 6 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1987:549118 HCAPLUS
DOCUMENT NUMBER: 107:149118
TITLE: Influence of foliar applied cytokinins on growth and essential oil content of several members of the Lamiaceae
AUTHOR(S): El-Keltawi, Naiem E.; Croteau, Rodney
CORPORATE SOURCE: Inst. Biol. Chem., Washington State Univ., Pullman, WA, 99164-6340, USA
SOURCE: Phytochemistry (**1987**), 26(4), 891-5
CODEN: PYTCAS; ISSN: 0031-9422
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Foliar application of the cytokinins kinetin, diphenylurea, benzylaminopurine and zeatin at the 1-10 **ppm** level has a general growth promoting effect on Mentha piperita, M. **spicata**, and Salvia officinalis, but not on M. suaveolens and Lavandula vera, grown under controlled environmental conditions. The essential oil yield of cytokinin-treated plants is also increased .ltoreq.2-fold on a fresh wt. basis relative to untreated controls, with only a minor influence on oil compn. in most cases. The increase in oil yield cannot be attributed to alteration in growth or development of the treated plants, or to changes in oil gland populations. In vitro assay of the enzymes catalyzing the rate limiting steps of **camphor** biosynthesis in S. officinalis and of (-)-**menthone** biosynthesis in M. piperita indicated that the increase in oil yield under the influence of cytokinin is a result of increased monoterpene biosynthesis.
IT **76-22-2**, **Camphor** **127-91-3**, .beta.-**Pinene** **470-82-6**, 1,8-**Cineole** **507-70-0**, **Borneol** **1196-31-2**, (+)Isomenthone **2216-51-5**, (-)**Menthol** **14073-97-3** **20752-34-5**, (+)-Neoisomenthol

RL: BIOL (Biological study)
(cytokinins effect on, in Lamiaceae)
IT **110639-20-8**
RL: BIOL (Biological study)
(of Mentha piperita, cytokinins effect on)

L53 ANSWER 3 OF 6 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1987:435045 HCAPLUS
DOCUMENT NUMBER: 107:35045
TITLE: Salinity depression of growth and essential oil formation in spearmint and marjoram and its reversal by foliar applied cytokinin
AUTHOR(S): El-Keltawi, Naiem E.; Croteau, Rodney
CORPORATE SOURCE: Inst. Biol. Chem., Washington State Univ., Pullman, WA, 99164-6340, USA
SOURCE: Phytochemistry (**1987**), 26(5), 1333-4
CODEN: PYTCAS; ISSN: 0031-9422
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Irrigation of spearmint (Mentha **spicata**) and marjoram (**Majorana** hortensis) with a saline soln. consisting of CaCl2 and NaCl reduces overall growth, suppresses essential oil formation and alters the monoterpene compn. of the resulting oil. Simultaneous foliar application of the cytokinin diphenylurea (at 10 **ppm**) or kinetin (at 4 **ppm**) largely reverses the adverse effects of salinity on both growth and essential oil prodn.
IT **546-79-2 3387-41-5**
RL: BIOL (Biological study)
(of marjoram oil, cytokinins and saline irrigation effect on)
IT **99-49-0 5989-27-5**
RL: BIOL (Biological study)
(of spearmint oil, cytokinins and saline irrigation effect on)

L53 ANSWER 4 OF 6 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1980:494143 HCAPLUS
DOCUMENT NUMBER: 93:94143
TITLE: The effect of zinc on growth and amino-acid metabolism in barley (Hordeum **vulgare** L.)
AUTHOR(S): Srivastava, R. S. L.
CORPORATE SOURCE: Dep. Bot., Allahabad Univ., Allahabad, India
SOURCE: Indian Journal of Agricultural Research (**1979**), 13(4), 245-8
CODEN: IJARC2; ISSN: 0367-8245
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Barley seeds were treated with 400 **ppm** Zn sulfate and then grown in sand with complete nutrient soln. including (++Zn) and excluding (+-Zn) Zn. Untreated seeds were also grown with full nutrient soln. as a control (--Zn) Zn. Dry matter accumulation and synthesis of leucine [**61-90-5**] + phenylalanine [63-91-2], .gamma.-aminobutyric acid [56-12-2], .alpha.-alanine [56-41-7], glutamic acid [56-86-0], serine [56-45-1], and glycine [56-40-6] were greater in Zn-treated than control plants. After 30 days, dry matter of ++Zn, +-Zn, and --Zn plants were 0.188, 0.182, and 0.168 g/plant, resp. Total free amino acids and amides were greater in Zn-treated than control plants except in leaves of 30-day-old plants, in which +-Zn plants contained 578 and controls 598 .mu./10 mg [sic] dry wt.
IT **61-90-5**, biological studies
RL: BIOL (Biological study)
(of barley, zinc effect on)

L53 ANSWER 5 OF 6 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1979:534706 HCAPLUS

DOCUMENT NUMBER: 91:134706
TITLE: Antimicrobial activity of aroma chemicals and essential oils
AUTHOR(S): Morris, J. A.; Khettry, A.; Seitz, E. W.
CORPORATE SOURCE: Res. Dev. Dep., Int. Flavors and Fragrances, Inc., Union Beach, NJ, 07735, USA
SOURCE: Journal of the American Oil Chemists' Society (**1979**), 56(5), 595-603
CODEN: JAOCA7; ISSN: 0003-021X
DOCUMENT TYPE: Journal
LANGUAGE: English

AB Of 521 fragrance materials tested, 44% were inhibitory against 1 of 3 test organisms (Staphylococcus aureus, Escherichia coli, or Candida albicans), and 15% were effective against all 3. Of 212 compds. subsequently tested against Corynebacterium, 30% were pos. against all 4 test organisms; however, only 4% had a minimal inhibitory concn. (MIC) as low as 50 **ppm**, compared with the control soap bacteriostat TCC which had a MIC of 0.08 **ppm**. In hand-disinfectant tests, no redn. of bacterial counts was obsd. in soaps contg. the most active fragrance compds. Apparently, a practical antimicrobial soap fragrance is not likely.

IT **78-70-6 79-92-5 83-66-9 89-78-1**
91-64-5 93-15-2 93-16-3 94-48-4
97-53-0 97-54-1 101-39-3 101-86-0
103-95-7 104-46-1 104-93-8 106-22-9
106-23-0 106-24-1 106-25-2 107-75-5
115-95-7 121-33-5 123-11-5, biological studies
124-13-0 124-19-6 124-76-5 127-91-3
138-86-3 141-92-4 142-50-7 489-86-1
498-16-8 502-99-8 507-70-0 564-94-3
1329-99-3 1331-92-6 1333-49-9
1754-00-3 2244-16-8 4194-00-7
5392-40-5 5989-33-3 6485-40-1
6709-39-3 7549-37-3 7786-29-0
8000-41-7 19009-56-4
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BIOL (Biological study)
(antimicrobial activity of)

L53 ANSWER 6 OF 6 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1968:418212 HCAPLUS
DOCUMENT NUMBER: 69:18212
TITLE: The absorption of potassium and several organic compounds by barley roots: effect of siduron
AUTHOR(S): Splittstoesser, Walter E.
CORPORATE SOURCE: Univ. of Illinois, Urbana, IL, USA
SOURCE: Plant and Cell Physiology (**1968**), 9(2), 307-14
CODEN: PCPHA5; ISSN: 0032-0781
DOCUMENT TYPE: Journal
LANGUAGE: English

AB The absorption of 42K by excised roots of barley (Hordeum **vulgare**) grown in 0-5 **ppm**. siduron (1-(2-methylcyclohexyl)-3-phenylurea) was a linear function of time for .gtoreq.60 min. with transport being unidirectional. The absorption of siduron was a function of the external concn. to the limits of its soly. (0.09 mM). However, the siduron-14C absorbed by roots grown in either 0 or 5 **ppm**. siduron was in a readily exchangeable form, and desorption for 4 hrs. exchanged 80% of the label. Glucose-14C, adenine-8-14C, and leucine-14C were actively absorbed with 70-85% of the label being absorbed in 24 hrs. Although roots grown in siduron absorbed less 42K, glucose-14C, adenine-14C, and more leucine-14C than similar roots grown in water culture, it is probable that these differences were not large enough to

account for the noted redn. (60%) in root growth.

IT **61-90-5**, biological studies
RL: BIOL (Biological study)
(root absorption of, siduron effect on, in barley)